



2023



SPRING ECONOMIC FORECAST

WOODS CENTER FOR ECONOMIC ANALYSIS AND FORECASTING



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THE DARK SIDE OF THE MOON: OUTLOOK FOR GROWTH AND INFLATION IN THE SHADOW OF THE FED

The Nation, Southern California and Orange County

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THE DARK SIDE OF THE MOON

“The Dude abides.”

– *The Dude, The Big Lebowski*

Overview

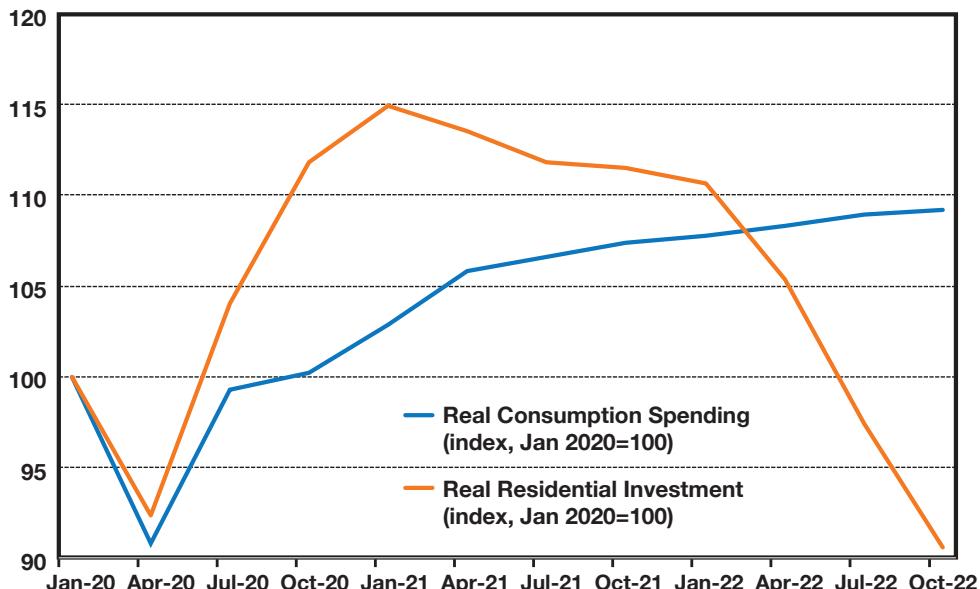
“Sometimes there's a man... I won't say a hero, 'cause, what's a hero? But sometimes, there's a man. And I'm talkin' about the Dude here. Sometimes, there's a man, well, he's the man for his time and place. He fits right in there.”

Those words, and a tumbling tumbleweed blowing aimlessly in the wind, rolled in with the opening credits of the *Big Lebowski*, a slacker/film noir/western/screwball comedy which burst into American theaters exactly 25 years ago this month. The deliriously fractured film features a “hopelessly complex plot that is ultimately unimportant”: a case of mistaken identity, a soiled rug for which reparations are demanded, a kidnapping that may or may not have occurred, severed toes and bowling alleys, interspersed with trance-like psychedelic dreams. Along the way, we meet vibrant, absurd, and eccentric characters: a short-fused cantankerous Vietnam vet, a fake millionaire, an avant-garde artist/femme fatale, a gang of Lingonberry pancake-loving German nihilists, and an adult film crime ring. But the main “hero,” the Dude — a pacifist, easygoing, permanently stoned aging hippie with a penchant for weed, White Russians, and bowling — towers above them all. Though he is swept up in a maelstrom of events outside his control, with his stoic/Taoist character, he never abandons his equanimity of aimlessness, his inner “Dude-ness.” So profound is the concept of “Dude-ness” that it has spawned an entire worldwide religion, Dudeism, complete with internet-ordained priests of the Church of the Latter-Day-Dude, which preaches “non-preachiness and practices as little as possible.”

The U.S. economy appears to have discovered its inner “Dudeness” over the past year, hopelessly adrift amidst powerful headwinds, but bearing stoically, nonetheless. The data have been decidedly mixed, painting a stubbornly confounding picture. Real GDP fell in the first half of 2022 only to perk up in the second half, posting a respectable growth of 2.9%. Underneath the hood, the picture is even more confusing. Real consumer spending has held up quite well, growing by 2.7% in 2022 even as residential investments collapsed by 10.6% (Figure 1). Business investments in R&D and equipment and software grew by 8.8% and 4.3%, respectively, a robust pace given the stage of the business cycle, while investment in non-residential structures fell by 6.6%. Since June 2022, the Conference Board leading indicator index has plumbed new depths consistent with recession levels. Yet, the labor market remains the most robust in at least one generation: last year alone, the economy added a jaw-dropping 4.8 million jobs, far above the roughly 1 million required to keep up with the labor force if the latter were to grow at rates consistent with demographic trends. Despite a strong fourth quarter, the S&P 500 ended 2022 down a dismal -19.9%, only a hair below bear-market territory where it had languished for most of the year. Nonetheless, the VIX index — a measure of stock market volatility — remained strangely subdued for most of the year, and credit spreads, which tend to widen in times of market stress, were remarkably narrow.

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FIGURE 1
Mixed Signals: Consumption and Residential Construction Diverging
(real consumption, real housing investments, index, Jan 2020=100)



In some cases, the actual data itself seem to spew a mixture of confusing narratives. Consumer sentiment is the lowest in over six decades, according to the University of Michigan index, but a tad above historical average according to the Conference Board. True, they tend to measure somewhat different things, with the Conference Board focusing mostly on the job market and the Michigan Survey on inflation, but the yawning gap between the two has never been this large since their inception

(Figure 2). The labor market is piping hot according to the establishment survey, but a cooler affair if one were to look at the household survey. The labor market swelled by 4.8 million in 2022 according to the former, but by a more meager 3.1 million in the latter. Even after adjusting to the establishment survey concepts, the household survey data shows a smaller 4.2 million gain (Figure 3). Other measures of labor markets, such as the Quarterly Census of Employment and Wages and payroll data from ADP, also indicate a slower pace of job growth last year, particularly in the first half.

FIGURE 2
Uncertainty at Fever-Pitch: Sentiment Indices are Far Apart
 (consumer sentiment, z-score)

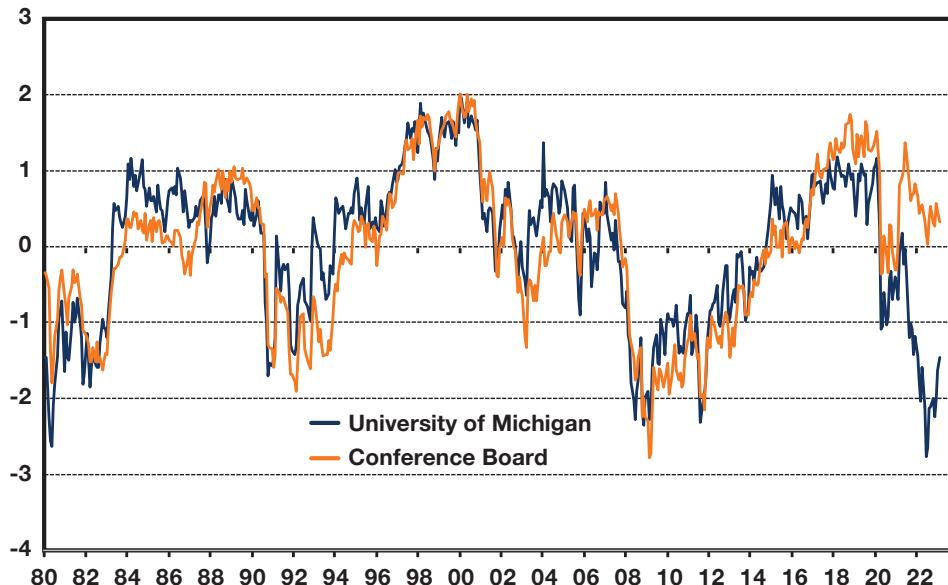
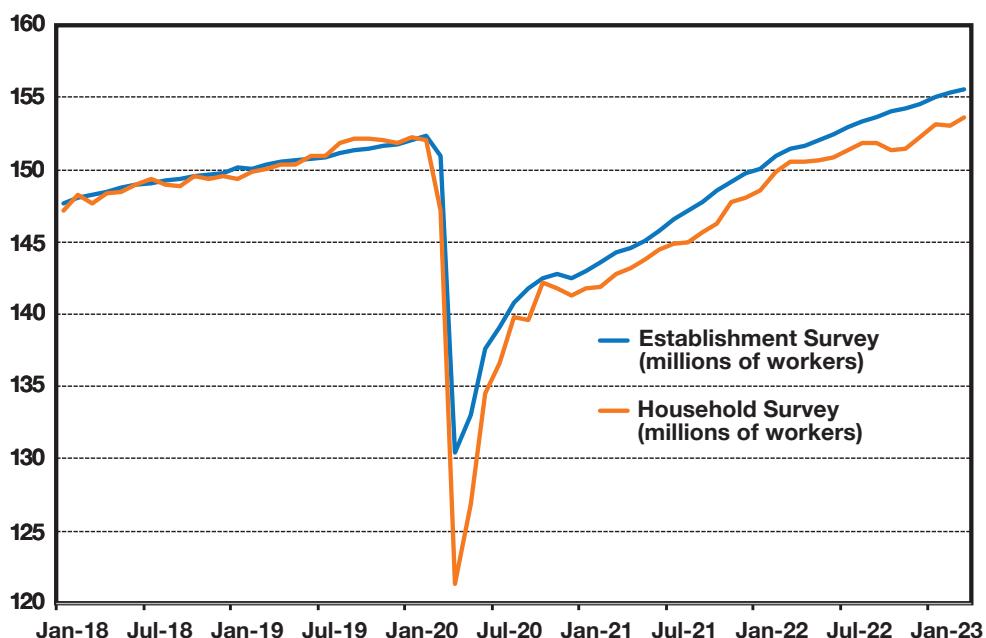


FIGURE 3
How Strong is the Labor Market? Who Knows! Surveys Painting Different Pictures
 (employment, establishment and household survey, Jan 2018 = 100)

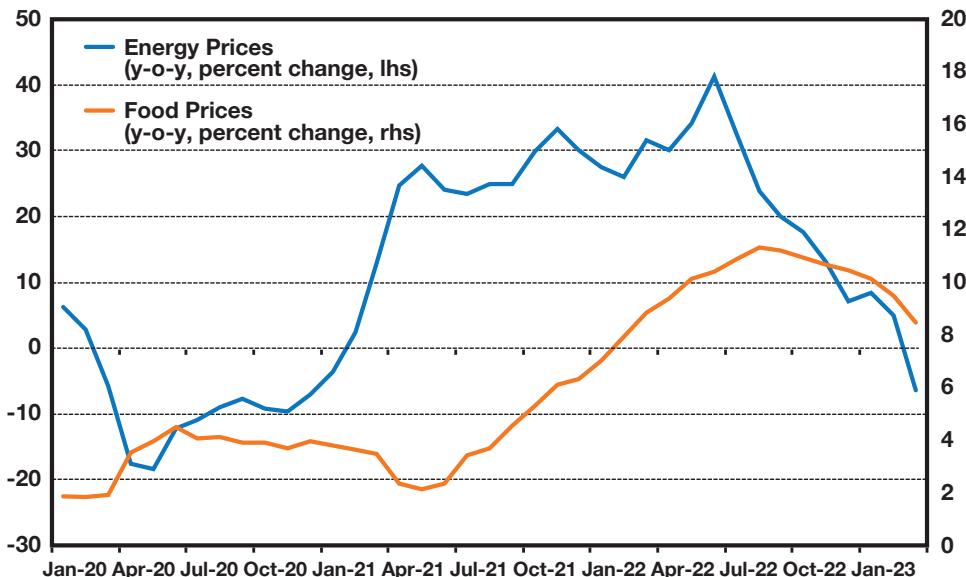


We can go on. If you feel as if you “tripped on a cloud and fell a eight miles high” and “tore your mind on a jagged sky” – as one of the most memorable songs of the *Big Lebowski* laments, you are not alone. “This is a very complicated case” — as the Dude would say — “a lotta ins, lotta outs, lotta what-have you’s.” Indeed. And things have gotten more complex this year when an exuberant market rally came to a screeching halt as fears of an impending banking crisis gripped global markets, reviving long-forgotten ghosts of the Lehman-era panic. Suddenly, everyone began pouring over banks’ balance sheets, trying to assess wider systemic risks they thought long vanquished. The Fed, the Treasury, and the FDIC — the Committee to Save the World, as *Time* magazine christened a similar trio in a different era — rushed to collect a few bodies and stomp out a few fires, easing fraught nerves and soothing worries.

So far, those attempts appear to have worked. The economy has brushed aside the sudden burst of panic, tapping its inner Dudeness that “life goes on, man.” In fact, the consensus outlook is currently doused in a high dose of unnerving optimism akin to the exhilarating feeling one must get at having survived a near-death experience. This is to be expected. But the optimism predates the current brush with disaster. From October 2022 to mid-February 2023, the market rallied by a staggering 16% and currently stands a hair below the cycle-highs established in mid-February.

On the face of it, there are reasons for such optimism. Consumer price index (CPI) inflation, the scourge that haunted much of 2022, has come down from a 40-year dizzying height of 9.1% in June 2022 to a current 5%. The price index for personal consumption expenditures (PCE), a broader measure of consumer basket, has stepped down from its peak of 7% to 5%. Much of this is due to a reversal in energy prices: The energy component of CPI grew by a staggering 42% on a year-over-year basis in June 2022. The rate has now tumbled to negative territory, pulling down the overall index (Figure 4). Gasoline prices have fallen from a high of \$5.10 per gallon in the summer of 2022 to a current \$3.60 — a reversal of 30%. The decline has been less dramatic in California, where gas prices fell from a high of \$6.30 per gallon to a current \$4.70 — a 25% decrease. Importantly, America seems to have made it past the point of greatest danger: Peak inflation appears to be behind us, at least as far as this cycle is concerned.

FIGURE 4
Inflation has Declined Mostly Due to Energy Prices
(energy and food prices, year-over-year, percent change)



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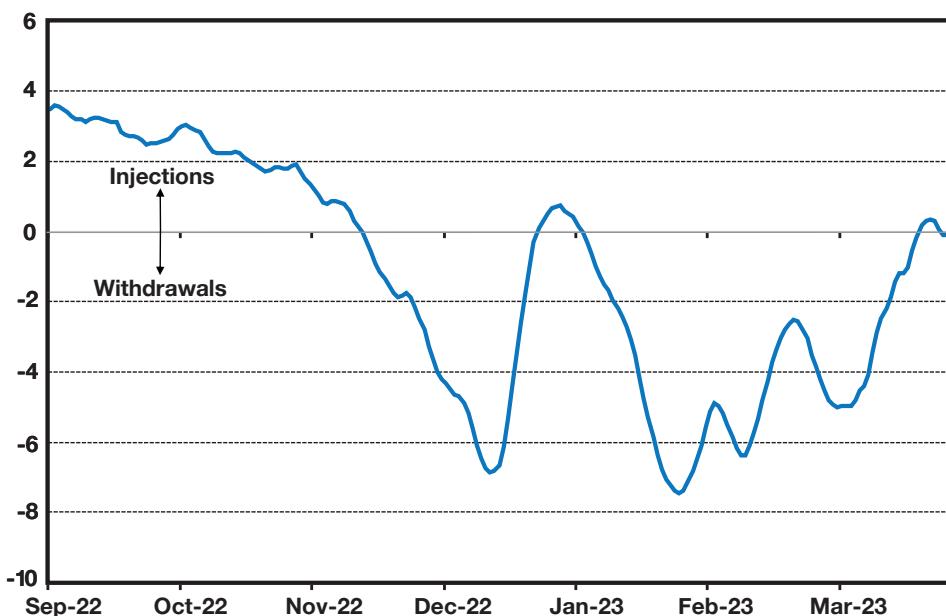
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Elsewhere in the world, the news has been similarly heartening. Europe's winter of discontent never really materialized. Through astonishing good luck, the continent experienced one of the warmest winters (the second warmest) on record, after also going through an uncommonly warm autumn. This is truly good news. The energy shock from gas shortages was supposed to rip the continent apart and plunge it in a deep recession. Instead, the opposite happened. Gas storages are filled to the brim as a warm autumn postponed the heating season and a mild winter allowed further replenishments (Figure 5). All told, Europe has used half of the gas resources of the previous two winters. Weather is also helping on the supply side: Wet and windy weather powered hydro and wind generators, bringing more supply to the grid. French nuclear power plants, shut down due to maintenance, are firing again. European gas prices have tumbled from their summer Olympian heights of \$339 per mgw to a current \$48, the lowest since September 2021. Lavish government support has also cushioned the blow of high energy prices on consumers and firms even when those prices were high. Overall, the EU has spent around \$630 billion (4% of GDP) on various price and direct payment support measures. These help, but weather is unquestionably the biggest factor in Europe's turn of fortune. Never since the Middle Ages have the fortunes of an entire continent been so dependent on the weather.

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FIGURE 5
Europe's Winter Never Materialized: Gas Supplies are Full
(injections and withdrawals, gas storage weekly, Twh)



China's economy is also picking up after the country abandoned the last vestiges of its ill-designed and ill-implemented zero-COVID policy. Real GDP growth last year came at a dismal 3%, the lowest since the 1970s, except for 2020 when covid struck (growth then was 2.4%). For China, these are recession-like levels: in 2021, it boasted a growth rate of 8.1%. But this year brings different fortunes. China's economy is expected to grow by 5.5% in 2023, buoyed by pent-up consumer demand and oodles of unspent cash. By some accounts this is already happening: Domestic travel has surged and wait lists at some restaurants are reportedly around 1,000 tables long. China's PMI manufacturing index, a forward-looking gauge of the production sector, leapt from 41.1 in December to 54.4 in January, the largest jump ever recorded. The property slump — a byproduct of an unprecedented crackdown by the authorities to break the country's addiction to debt-finance property — has eased, thanks in large part to government efforts to now revive the sector. Caps on

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borrowing for property developers have been suspended; banks are ordered to rescue unfinished projects; local governments are stepping up efforts to guarantee some loans to help developers complete projects. These measures have breathed new life into the beleaguered sector.

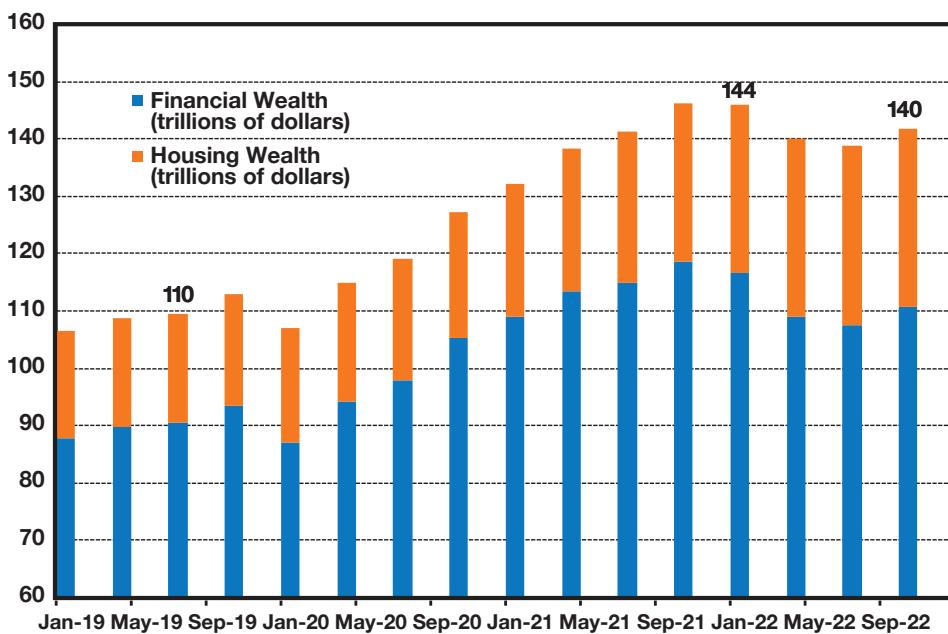
Above it all, perhaps the most important reason for a dose of optimism is the resiliency of the global economy. There was no shortage of drama last year: rapid rate hikes, the Russia/Ukraine war, commodity and energy shocks, and continued supply disruptions from China's draconian lockdowns. Yet, the global economy took all this astride. All told, global growth came at 3.2% — 1.3 percentage points below what was expected back in December 2021 — but not a calamity either.

Things look even brighter this year. The American economy is one of the most pre-eminent examples of both resiliency and improved outlook. Despite a heavy handed tightening by the Fed — the fastest in over four decades — the economy has refused to roll over. Consumer finances are better than originally envisioned. Real disposable income has grown for eight straight months, thanks to a strong labor market and incremental improvements on inflation. Household wealth even rose in the fourth quarter after falling in the first three, as a rally in the stock market pushed up financial wealth. Wealth is still down 6% relative to all-time highs set in the fourth quarter of 2021, but a cool 25% (\$27.5 trillion) above pre-pandemic levels (Figure 6).

The strength of the labor market has become the stuff of legends. At a current 3.6%, the unemployment rate is the lowest in over five decades, back when the Dude was penning the Port

Above it all, perhaps the most important reason for a dose of optimism is the resiliency of the global economy. There was no shortage of drama last year: rapid rate hikes, the Russia/Ukraine war, commodity and energy shocks, and continued supply disruptions from China's draconian lockdowns. Yet, the global economy took all this astride.

FIGURE 6
Household Wealth Through the Roof: \$27.5 Trillion above pre-Pandemic
(trillions of dollars)



Huron statement (“the original, not the compromised second draft”) and hanging out with the Seattle Seven. A broader measure of unemployment which accounts for marginally attached workers and those working part-time for economic reasons tells a similar tale, with the rate being the lowest in over 25 years (since the start of the series). High frequency estimates point to a sturdy first quarter GDP growth: the Atlanta Fed tracker pencils it at 2.5%; the OECD weekly tracker has it at an even healthier 2.8%. Even the long-languishing housing sector has perked up lately: New-home sales jumped in January to a 10-month high. Confidence surveys of both homebuilders and homebuyers have improved. Most importantly, the market is giddy with anticipation of a rate pause and subsequent cuts starting as early as this June. As far as it is concerned, the March hike was the last of this cycle.

This turn of fortunes has spawned dreams of a continued expansion where worse fears fail to materialize and the economy flies high, much like the Dude’s astral journey in his purple-haze induced trance. This “no-landing” scenario is quite a new twist in the old debate between the “hard-landing” and “soft-landing” takes we have been subjected to for the better part of a year, since the Fed began raising rates. The soft-landing crowd expects a gentle easing of economic activity, one where growth slows but does not falter or go into reverse and where job losses are rare and concentrated only in a handful of vulnerable sectors (such as tech and housing). The hard-landers argue that the feat of bringing down inflation without spiking unemployment is not only elusive but most likely illusive, given the current macroeconomic conditions of decades-high inflation and an excessively tight labor market. Strangely, despite appearances, the gulf between the two camps is not as large as one would expect. Even the hard-landing gang expects the incoming recession to be short, mild, and rather inconsequential, a pinprick, so to speak. In this sense, “the preferred nomenclature” (as Walter Sobchak would observe) is not “soft-landing,” “hard-landing”, or “no-landing”, but rather slow-cession, mild-cession, or no recession scenarios.

Alas, as much as we would enjoy a trance-like escape from reality, we fear that our outlook is a bit gloomier and a few shades darker than any of the consensus scenarios. While the economy is not about to plunge into the abyss of the Great Recession, it is also unlikely to skate as relatively unscathed as either of the three scenarios envisions. High inflation, interest-rate hikes, a tech-sector crash, and looming troubles in commercial real estate, invoke echoes of every garden-variety recession we have witnessed since the 1980s, from stagflation of the 1980s to the S&L crisis of the 1980s and 1990s, to the bursting of the tech bubble early this century. As such, our outlook calls for a “normal recession,” not the heart-stopping calamity of the financial crisis but a garden-variety kind akin to the early 1990s or 2000s. The economy will likely bear less resemblance to the Dude’s easy-going carefree endurance we have witnessed so far and more to the volatile, combustible, always-ready-to-blow character of Walter Sobchak, the Dude’s best friend and sidekick. That’s because underneath the hood, the economy is more fragile than originally meets the eye, which means that even moderate shocks may deliver punches deadly enough to derail it.

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Start with fragility. The rosier three scenario consensus views hinge primarily on the strong belief that the system is less laden with debt now and balance sheets of banks and consumers are much healthier than in the past. But the strength of these arguments has begun to ebb as of late as the balance sheets of both banks and consumers appear to be more frayed than merely one year ago.

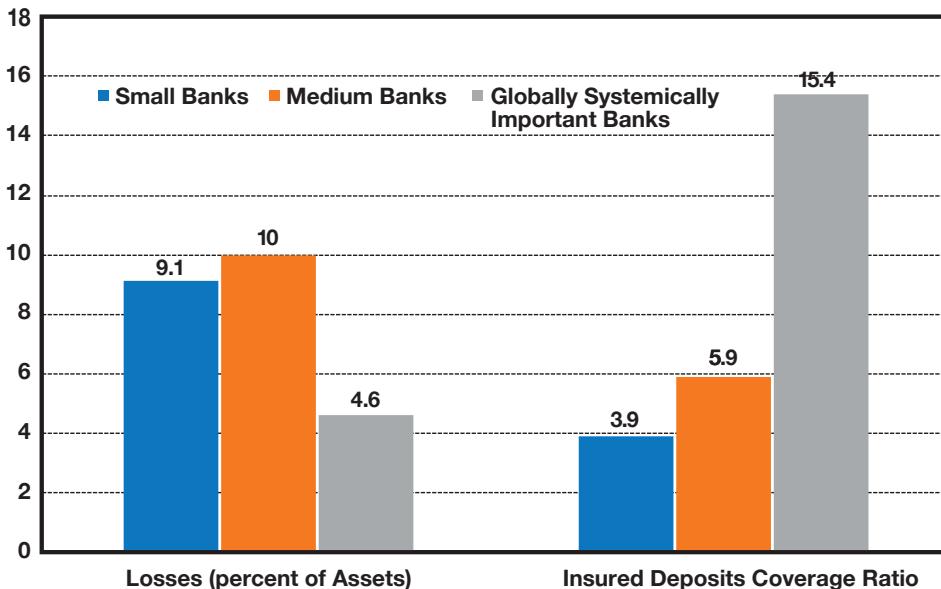
Take the banking system first. The failure of three banks — SVB, Signature and Silvergate — have poured cold water on the notions of a fortress-like banking system. After all, if corners of the market which combine for a minuscule \$330 billion in assets (1.5% of the market) can cause a heart-stopping scare, the system may not be that strong in the first place. And the story of their failure is as pedestrian as it is straightforward: they were not felled by exotic derivatives or clever financial engineering but by a simple duration mismatch between their short-term liabilities and long-term assets, which became more and more deadly as interest rates marched upwards.

These interest-rate losses triggered a hair-raising panic worldwide. There was some reason for this: On closer scrutiny, it was revealed that unrealized losses across America's banking system from their Treasury and mortgage-backed security assets were a vast \$620 billion at the end of 2022, according to FDIC data. But a widely cited academic study reckons that losses are far larger. Marked-to-market losses of the entire portfolio of bank assets amounts to a frightening \$2.2 trillion, more than the \$2.1 trillion of bank capital (Figure 7).

FIGURE 7
Not So Healthy: Small/Medium Size Banks are Exposed to Heavy Losses
(percent of total assets and insured deposits)

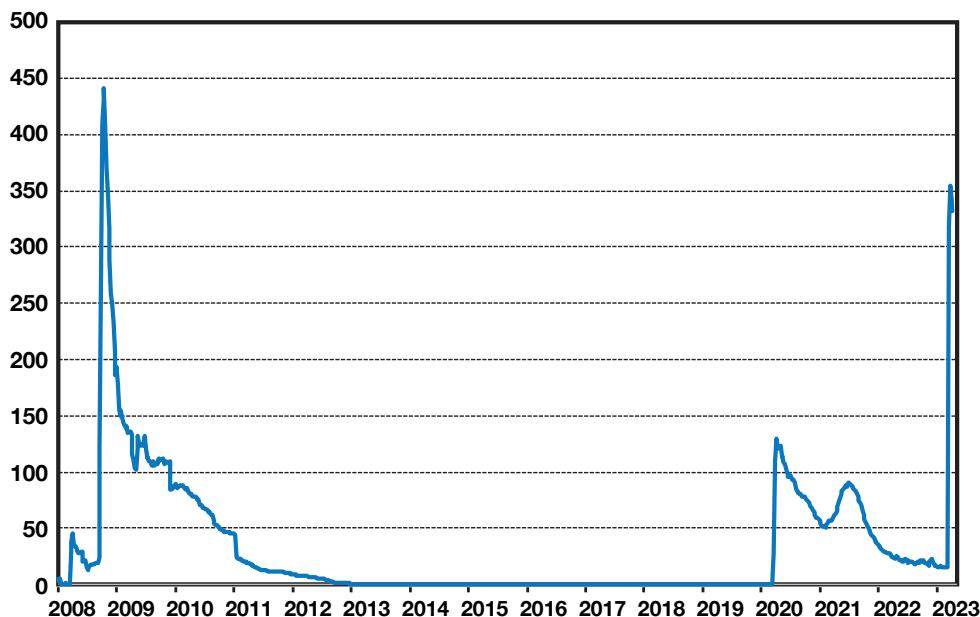
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Of course, banks don't have to mark-to-market, so these hypothetical losses for now are just that: hypothetical, as long as depositors stick around. This seems to be the case for big banks where deposits tend to be stickier. Importantly, whatever ails the banking system currently is a liquidity rather than a solvency crisis. The former is easier to deal: Recent moves by the Fed and Treasury appear to have succeeded in dousing the smoldering fires of a nascent crisis. The Fed's balance sheet swelled by a whopping \$300 billion since the collapse of SVB as it freely lent to banks, accepting in return Treasuries and MBSs at face value rather than market value (Figure 8).

FIGURE 8
Crisis Level: Borrowing from the Fed has Skyrocketed
(billions of dollars)



But while a violent credit crunch may have been quashed, we remain unconvinced that the current banking episode is entirely behind us, in large part because the health of small/regional banks continues to be of grave concern.

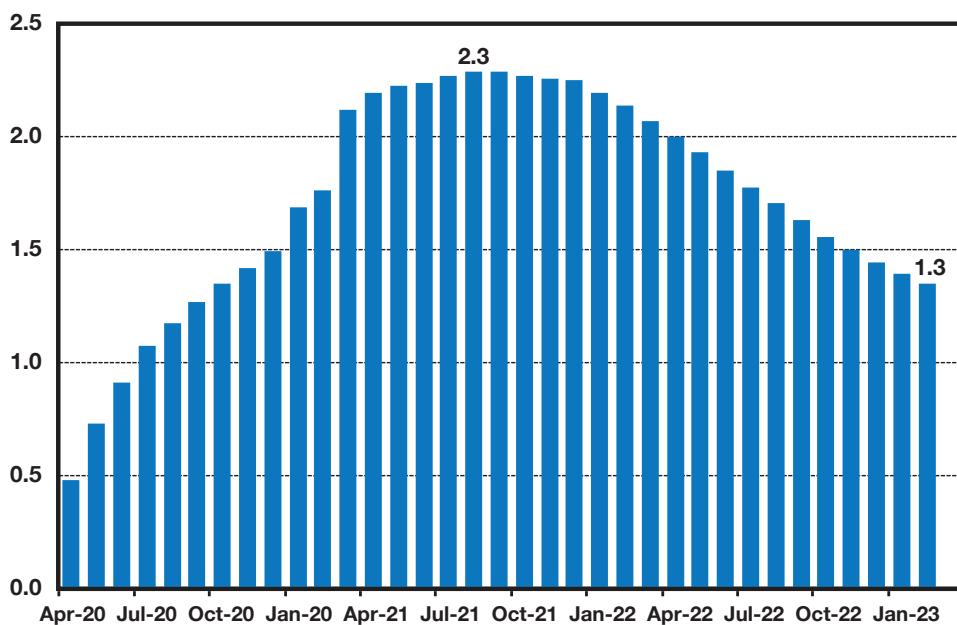
But while a violent credit crunch may have been quashed, we remain unconvinced that the current banking episode is entirely behind us, in large part because the health of small/regional banks continues to be of grave concern. Deposits have fled. Depositors withdrew a staggering \$196 billion from small banks right after the collapse of the SVB. At the same time, deposits at large banks swelled by \$67 billion, while money market funds saw an influx of \$120 billion. Worse, in the case of weaker regional banks, concerns about liquidity (interest-rate risk) may ultimately transform into solvency risk (credit risk), should loans in their balance sheet begin to sour due to tighter credit constraints.

Signs of trouble may already be brewing. Small banks finance around 80% of commercial real estate (CRE) loans, even as valuations are down nearly 10% on a year-over-year basis and a full \$730 billion in CRE loans is due to mature this year. A large portion of this debt will need to be refinanced precisely when small banks tighten credit spigots — a sure recipe for default. To be sure, this is not a brutal credit crunch à la 2008-2009 but rather a low-grade simmering corrosion that plays out over weeks and months, collecting victims along the way. This means that the FDIC's meddling in the banking sector is far from over. When all is said and done, we expect it will likely be forced to orchestrate a few more marriages and preside over a few more funerals.

This is not a brutal credit crunch à la 2008-2009 but rather a low-grade simmering corrosion that plays out over weeks and months, collecting victims along the way.

Cracks have also begun to appear in consumer balance sheets. Consumers are relying significantly more on credit card debt than in the past: The six largest jumps in consumer credit in the last 20 years have occurred over the past six months. Credit card debt grew by a jaw-dropping 16% in the second half of last year. The cost of borrowing has also shot up. The interest rate on credit card balances has sky-rocketed to 19%, the highest since 1995 (the beginning of the data series). Though still relatively low by historical standards, defaults on credit card balances and auto loans have begun to edge up. And banks have dramatically tightened access to credit to levels consistent with recession. Excess savings — the cushion of extra deposits that consumers built up during the pandemic thanks to excessive government largesse and forced savings — have dwindled as inflation takes a hefty chunk and the government spigot is turned off. At its height, the fortress of America's extra cash pile reached \$2.5 trillion. That figure currently stands at a much more modest \$1.3 trillion (Figure 9). Reduced savings and less access to credit will undoubtedly chip away at consumption over the forecast horizon.

FIGURE 9
Excess Savings are Dwindling
(trillions of dollars)



All this is happening in an environment where inflation is still stubbornly high. And while it is no longer raging as it did throughout last year, it continues to simmer. As we have argued for quite some time, though peak inflation is firmly behind us, conquering it will require a steely resolve from the Fed. That's because inflation is stickier, more stubborn, and harder to tame than most expect. It has migrated from goods to services: Core service inflation (stripped of energy) is running at 7.1% — the highest in over four decades. And service inflation is harder to slay because it is driven by two factors: housing and wages. As we argue below, while housing costs will likely put downward pressure on inflation starting this fall, wages will take a bit longer given the tight labor market.

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More worryingly, despite signs of a resilient economy, there is no denying that growth is slowing. Real GDP grew by nearly 3% in the second half of 2022, but real final sales to private domestic purchases — a more direct measure of private sector strength — rose by a paltry 1.1%. Corporate earnings tumbled by -4.7% in the fourth quarter of 2022 and are expected to fall further this year. Importantly, the labor market is not a reliable indicator when gauging the stages of the business cycle. The unemployment rate and initial claims are the lowest in the cycle right before a recession strikes, as they are now. In contrast, leading indicators, such as the yield curve, residential investments, and durable consumer goods — which tend to be much more reliable guides — are all flashing red.

High inflation, a slowing economy and a frayed banking system combine for a tough outlook ahead. We do not expect the disaster of 2008, but not every recession is 2008. Indeed, our gloomier-than-the-consensus garden-variety recession outlook owes much to the view that the Fed's ability to skirt a downturn has been severely diminished. Managing the un(holy) trinity of stubborn inflation, weak growth and a frazzled banking sector is an improbable (if not impossible) mission. And should the banking system prove to be more fragile than we expect, the Fed will (rightfully) prioritize high-octane financial issues over slow-burning macroeconomic ones, such as inflation. This means that a recession with stagflationary dynamics is an entirely plausible outcome, one that undergirds a slightly more pessimistic version of our baseline scenario.

In times like these, we all need a *Big Lebowski* and the zen-like carefree laidback ethos of the Dude to soothe our worries and steel our nerves. The film's last dialogue is almost a hymn to the very essence of Dudeism where the narrator instructs the Dude to "take it easy." And in the most memorable line of the film, one that has entered the cult-like lexicon of legions of fans, the Dude responds: "the Dude abides." That's when we realize that there's freedom in abiding, in going with the flow, where taking it easy becomes an art form and a life choice. So, grab your bowling shoes, mix yourself a White Russian, channel your inner-Dudeness, and mark it zero as we abide and roll with the punches in the next few months. It will be quite a trip!

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The Ides of March: An Anatomy of a Banking Crisis

"That rug really tied the room together."
— *The Dude, The Big Lebowski*

It all started with a soiled rug. The Dude's carefree existence of "driving around, bowling and the occasional acid flashback" is ruthlessly interrupted by a pair of thugs who mistake him for someone else, administer a dose of enhanced interrogation and soil his threadbare Oriental rug. Uncharacteristically intent on seeking reparations for his beloved rug, the Dude is hopelessly ensnared in a web of ransom demands, a kidnapping plot, and a complex embezzlement scam that not only gets him roughed up a few times but may even endanger his life. All, for a rug "that really tied the room together."

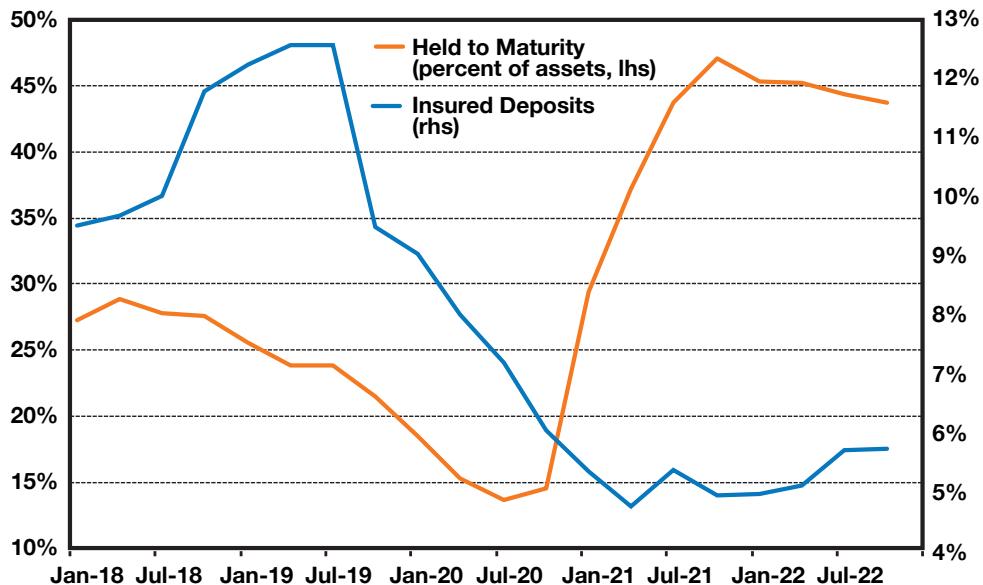
Low interest rates were the “rug that tied the room together” for the past 15 years, underpinning economic activity, lubricating the gears of the financial system, and underwriting growth. Once gone, something was bound to break. As of now, three mid-sized U.S. banks and one global behemoth have met their end. March seems to be a particularly inauspicious month: Exactly 15 years ago – in March 2008 – the world witnessed the stunning collapse of Bear Stearns. Echoes of that time sparked concerns that a full-blown banking crisis is in the offing. And though the fever-pitch panic seems to have ebbed currently, fears persist that this episode may have harrowing sequels and that fragility in the banking sector may be deeper than originally anticipated. After all, the entire banking system is exposed to higher rates and the vulnerabilities they inflict.

To understand whether a rot is beginning to take hold in the banking sector, it helps to look at the factors that brought on the demise of the few victims we have so far. “All happy families are alike, but every unhappy family is unhappy in its own way,” Tolstoy once famously quipped. Indeed, each fallen bank had its own unique risks and idiosyncratic features that led to its failure.

Silicon Valley Bank – with around \$209 billion in assets as of end-2022 – catered to techies and wealthy clients in the tech-orbit. It saw a dizzying rise in deposits during the pandemic-fueled era of cheap money: from \$62 billion at the start of 2019 to \$173 billion at the end of last year. Unable to generate enough loans to match this meteoric rise in deposits, it chose instead to invest in long-dated Treasuries: Its investment securities portfolio swelled from \$27 billion in 2019 to \$120 billion in 2022. Around \$91 billion of these were classified as held-to-maturity (HTM) assets and the rest as available-for-sale (AFS). Overall, the bank’s long-term assets made up 55% of overall assets, much higher than the industry average of around 24%. Importantly, it held an inordinate number of uninsured deposits: a whopping 94% compared to the banking sector average of 50% (Figure 10).

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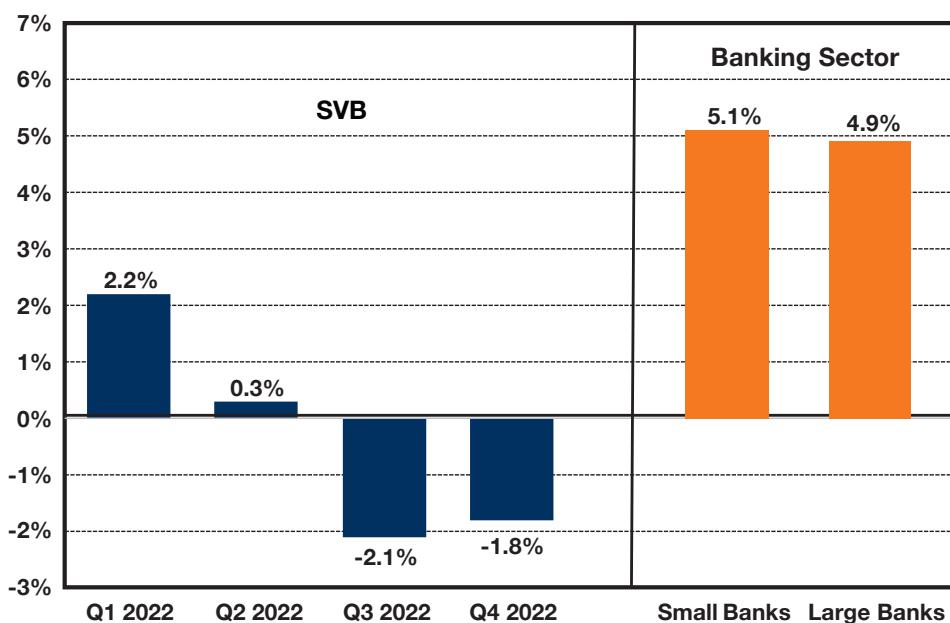
FIGURE 10
The Woes of SVB: Large Portion of Long Term Assets and Fligthy Depositors (percent)



As interest rates rose sharply, SVB suffered two acute shocks. First, troubles in the tech sector — which experienced something akin to a crash last year — caused a steady withdrawal in deposits. Between the first and the fourth quarter of 2022, its deposits shrank by \$25 billion. Second, and most importantly, having failed to hedge its interest rate risk, the value of its long-maturity bond portfolio collapsed as interest rates marched upwards. By the end of 2022, it had \$16 billion in unrealized capital losses. This, however, did not affect its required capital ratios because for banks of its size neither held-to-maturity nor available-for-sale securities need to be marked-to market (in contrast, large banks are required to mark AFS securities to market). This matters: Looking at the adjusted net leverage ratio (which subtracts unrealized capital losses on the total securities portfolio), SVB's position was in far worse shape even as early as the first quarter of 2022. The adjusted leverage fell far below the 5-percent level regulators define as "well-capitalized" and the 4-percent regulatory minimum (Figure 11). As deposits continued to leak, SVB was forced to liquidate a chunk of its bond portfolio at a \$1.8 billion loss in early March. This prompted a stampede — \$42 billion in deposits evaporated in one day, with an additional potential \$100 billion the next. In less than 40 hours, the 40-year-old bank was no more.

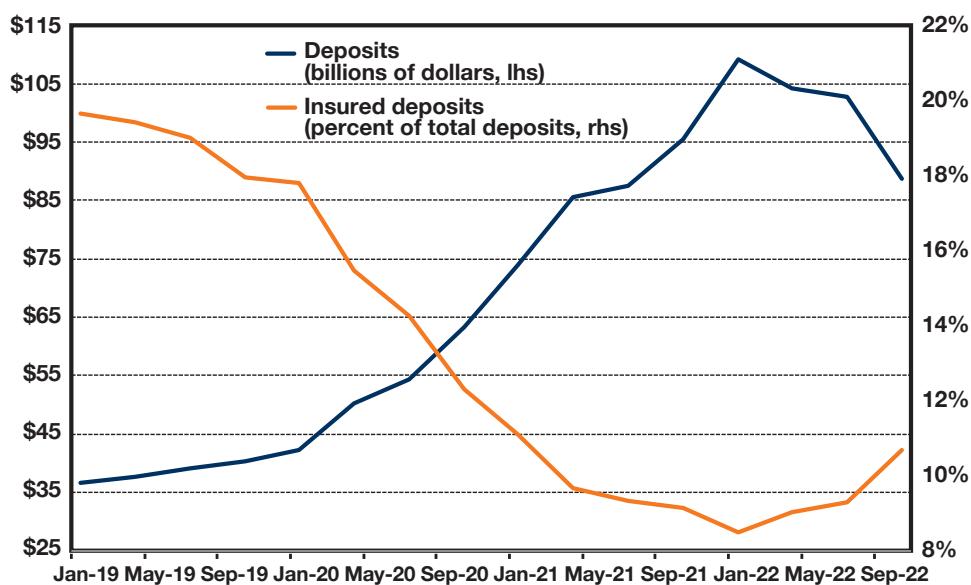
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FIGURE 11
SVB an Outlier: Adjusted Net Leverage Ratio Below Regulation
(net adjusted leverage, percent)



Though commonly lumped together, Signature Bank was not plagued by exactly the same issues. It had a more diverse customer base, with commercial real estate companies, high-end white-collar businesses, and private equity firms being its primary customers. Most notably, it held a sizable amount of crypto deposits, which rose from \$10 billion in 2021 (when the company first reported them) to \$29 billion by early 2022. Unlike SVB, its Treasuries portfolio was small — around 23% of total assets, and while SVB was piling on more long-term debt further increasing its interest-rate exposure, Signature did the opposite, keeping overall duration exposure low. What it had in common with SVB was rapid growth during the pandemic (its assets more than doubled from \$48 billion in 2019 to \$120 billion in 2022) and an outsized share of uninsured depositors (around 90%) (Figure 12).

FIGURE 12
Signature Bank Was Also Vulnerable
(billions of deposits and percent of insured deposits)



What ultimately brought on its death was not interest or duration risk, but a combination of flighty depositors, the specter of souring loans and panicked regulators. As the crypto winter wore on, Signature saw its crypto deposits evaporate, sinking to \$17 billion at the end of 2022. Overall, a full \$20 billion in deposits had fled the bank since January 2022. Its asset-side did not appear to be healthier: As of the fourth quarter of 2022, it had issued \$35 billion in real estate loans (mostly in the New York market) and an additional \$35 billion in commercial and industrial loans (mostly private equity lending). Both industries have struggled under the weight of high interest rates, and though no massive loan losses were recorded at the time of its demise, the outlook did not appear bright. Fearful that it would be the next victim of a chaotic bank run, the FDIC signed Signature's death warrant over that fateful weekend, seizing its assets and shutting it down.

By now, a full-blown bank panic was brewing and the hunt for the next victim was on. They found it, unsurprisingly, in Credit Suisse, the Swiss bank whose story is as sordid as it is sad. In a rolling melodrama that has spanned the better part of a decade, the bank's high-profile affairs were a constant stream of rolling disasters. It suffered a \$5.5 billion loss from the failure of Archegos Capital and \$1.7 billion from the implosion of Greensill Capital, a supply chain firm. Over 7% of its revenue in the past decade went to fines and penalties, leaving the company with a net loss of \$3.4 billion after taxes. Last year, it was investigated by the House of Representatives for potential connections to Russian oligarchs, and as recently as early March, it was forced by the SEC to disclose "material weakness" in its financial reporting. Deposits fled. Total outflows amounted to 8% of assets under management in the fourth quarter of 2022. Its chaotic unwinding was due to a simple loss of faith from investors and depositors. It did not matter that the bank met the highly stringent European capital and liquidity standards, had fully hedged its exposure to interest rate risk and had been minutely scrutinized and stress tested. In the end, the Swiss National Bank (SNB) had to preside over its unhappy union with UBS, bringing an end to the storied existence of the 167-year-old bank.

More victims would undoubtedly have followed had it not been for the swift response of authorities. Haunted by ghosts of crisis past, they moved quickly to squelch fears and breathe trust and confidence in the banking sector. "I will not abide another toe," screamed the Big Lebowski, the fake millionaire not the Dude, upon receiving a severed toe presumably of his kidnapped wife. "I will not abide another bank" seems to also be the mantra adopted by the regulators during this latest panic bout. With lightning speed, the Fed and the Treasury rushed to open up liquidity spigots and protect all deposits of the failed banks — insured and uninsured — hinting at similar actions at other banks. On the liquidity front, banks were encouraged to borrow liberally from the discount window. More critically, a new program was set up, the Bank Term Funding Program (BTFD), which is both shockingly bold and creative: banks can borrow freely, pledging any collateral. Crucially, the collateral would be valued at face value rather than market value, which for some long-term U.S. Treasuries can be more than 35% above market value.

This largesse is what you would expect in a full-blown banking crisis. Yet, on the face of it, what befell SVB and Signature appears to be poor risk management combined with woes in corners of the economy (such as tech and cryptocurrency). Importantly, as we are being consistently assured by authorities, the banking sector is much healthier today than at the onset of the financial crisis. Bank tier one capital ratio — a measure of the soundness of the financial system — stands at a healthy 13.4% and the banking sector leverage, at 75% of GDP, is far below the 122% rate recorded at the height of the financial crisis. At the end of 2022, banks held around \$2.5 trillion cash on hand to meet depositors' needs and around \$2.2 trillion in tier one capital. Moreover, post-financial crisis, regulators were supposed to ensure that banks had plenty of capital, held on to loads of cash and limited their risk exposure so that extraordinary measures like the ones recently undertaken would be a relic of the past.

When all is said and done, these measures will be judged either as an indefensible overreaction or a necessary tool to stem the rot from spreading. Our view hews closer to the latter argument: Despite assurances, we believe the banking sector is significantly more fragile than what headline figures show. Signs of distress are everywhere: Borrowing from the discount window has averaged \$330 billion since early March, a 20-fold increase over the historical average of around \$15 billion. Borrowing from the newly minted BTFD program rose to \$79 billion as of early April, while the

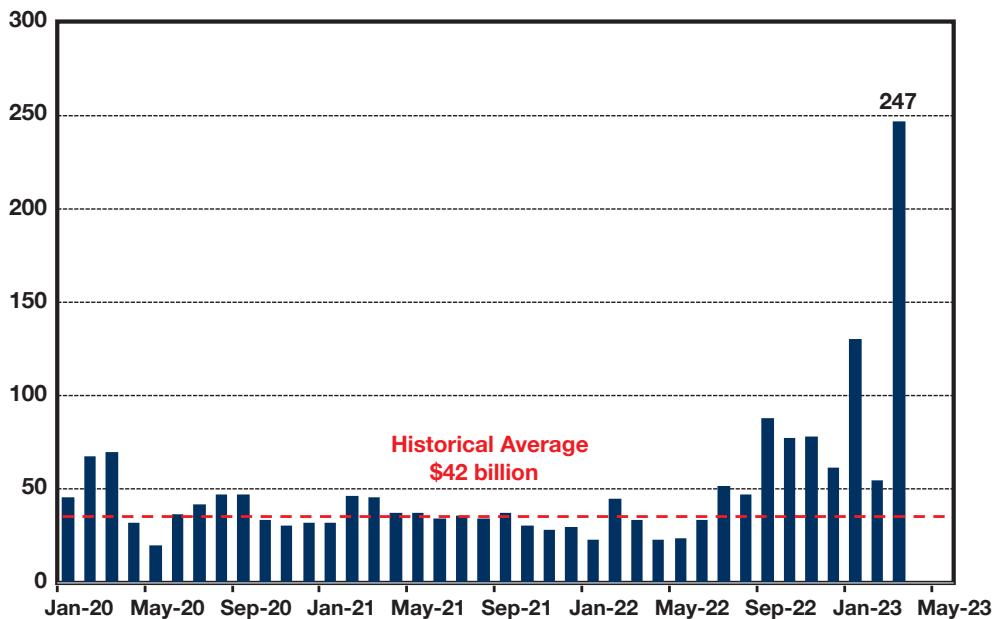
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Federal Home Loan Bank, a lender-of-next-to-last resort, issued a total of \$430 billion loans so far this year — what it typically offers in an entire year (Figure 13). Deposits have fled the banking system: Commercial bank deposits have slumped by \$783 billion compared to a peak of a year ago.

FIGURE 13
Tough Times for Banks: Borrowing from FHLB Has Soared
(billions of dollars)



However, considering the banking system as one monolithic entity would be a mistake in this case. Regional banks both small and mid-sized are significantly more at risk than large global systemically important banks. This is not to say that large banks are entirely immune. They have suffered sizable losses in their bond portfolios as a result of higher interest rates. Adjusted for rate-driven losses in their held-to-maturity portfolio, their tangible common equity to tangible asset ratio falls from a healthy 6% to a more worrisome 4.7%. But given that their deposits are stickier and more broadly diversified, they are unlikely to suffer a sudden unmanageable outflow that would force them to liquidate portfolios at a loss.

Small and medium-sized regional banks are another matter. Their tangible equity to tangible asset ratio adjusted for unrealized losses currently stands at 5.1% — decent, but not all that comforting in the face of such uncertainty. In some cases, their positions are even more vulnerable than that of SVB: According to a recent academic paper, roughly 10% of the 4,700+ banks have larger unrealized losses than SVB and 10% have lower capitalization rates than SVB. If half of the uninsured deposits flee the most vulnerable banks, around 190 banks would be insolvent, placing \$300 billion of insured deposits at risk, according to these authors.

Regional Western banks, especially those based in California, are particularly vulnerable. First Republic, a mid-size bank slightly larger than SVB, has reportedly lost \$70 billion in deposits since the start of the year. Pacific Western has lost around one fifth of its deposits. SVB and Signature were indeed outliers in terms of uninsured deposits, but some of the most vulnerable banks are not far behind. Uninsured deposits for First Republic and Comerica make up 67% and 60% of total

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deposits, respectively, far above the overall market of 50% (Figure 14). Some banks appear worse than the failed banks on several metrics. At 60% of total assets, First Republic's long-term assets are significantly higher than SVB's at 40% (Figure 15). Assets available-for-sale at First Republic and First Foundation Bank as a share of total assets are below 2% — far lower than the two failed banks. It is not a surprise that the market value of vulnerable banks has taken a beating: Despite a rescue package of \$30 billion from 11 larger banks, First Republic has lost 88% of its market value over the past month; Pacific Western is down by 64%; and Western Alliance by 57%. It would not be entirely surprising if the fate of SVB and Signature befalls these banks.

FIGURE 14
SVB and Signature are Outliers, but Others not Far Behind
(uninsured deposits percent of total)

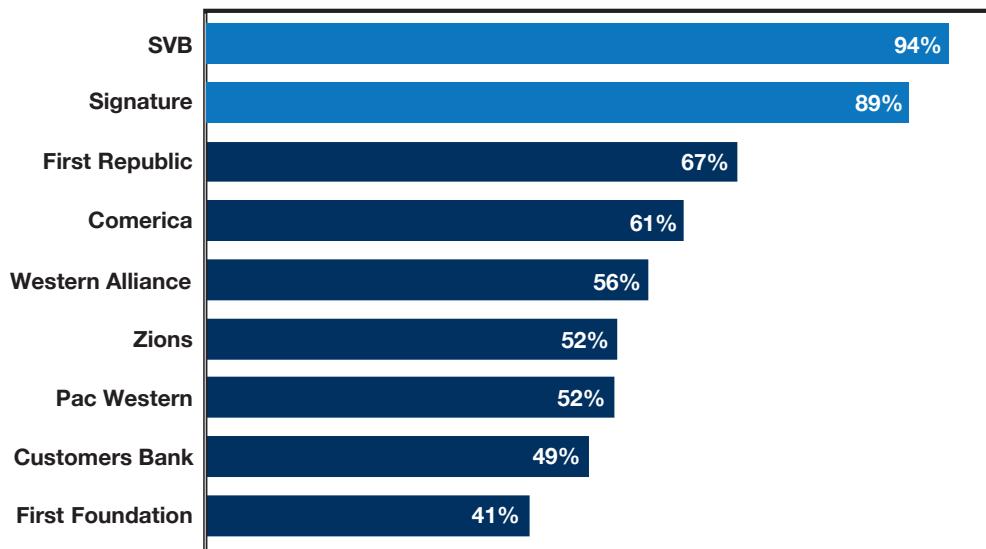
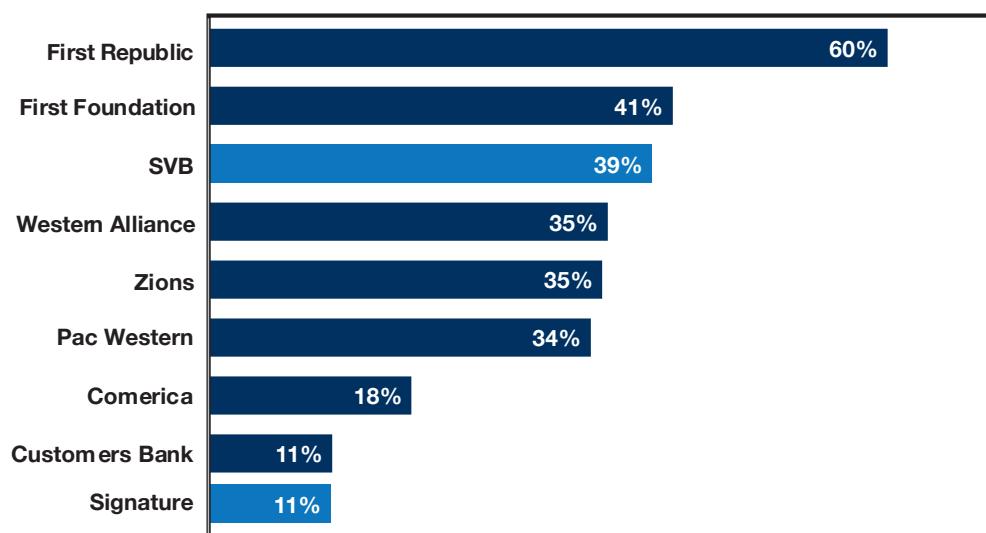


FIGURE 15
Some Banks are in Worse Shape than SVB and Signature
(long term assets as percent of total assets)



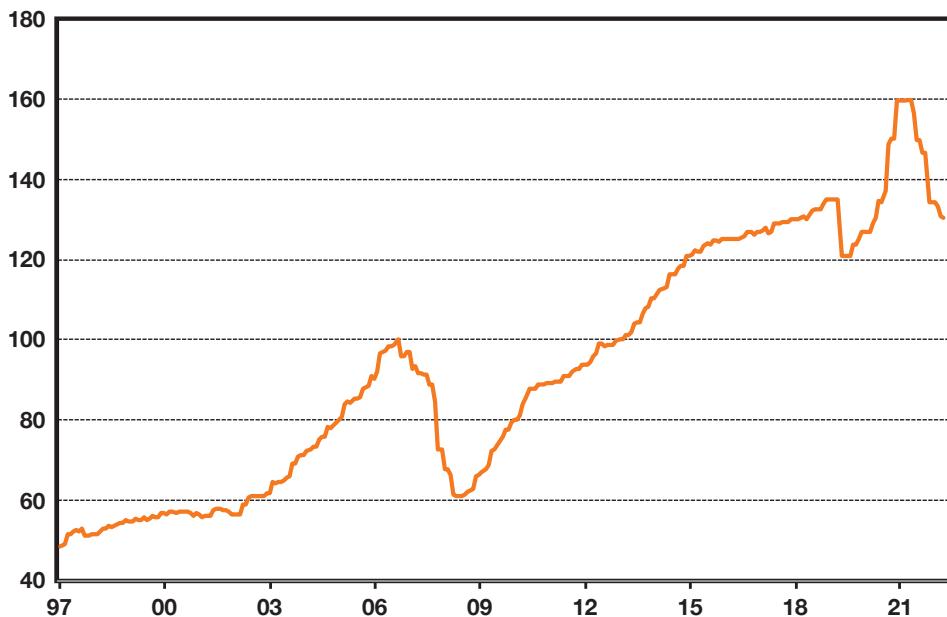
Additional bank failures do not necessarily mean an outright calamity. From 2010 to 2020, the FDIC closed more than 200 banks, though they were small with the vast majority having less than \$1 billion in assets. Even if a mid-sized bank, such as First Republic, were to fail, it won't sink the banking system. Indeed, it is important to spell out what the current banking crisis is not: It is not the financial crisis of 2008. Then, the issue was default risk: The mortgage-backed derivatives that the banks gorged on blew a \$1.5 trillion hole in credit losses on banks' balance sheets once mortgage loans went sour. Moreover, no one really knew what was inside those strange mortgage-backed derivatives, which meant it was next to impossible to value them in a consistent and systematic manner. The issue today is interest-rate and duration risk, an easier issue to address by flooding the market with ample liquidity, as the Fed and the Treasury are currently doing.

But while doomsday scenarios à la 2008 may not be in the cards, the embers of this crisis are likely to smolder a while longer. There are two reasons for a less sanguine outlook. The first is that the lines between interest risk and credit (default) risk become blurred the longer interest rates remain high. While troubles so far are concentrated in the banks' bonds portfolios and loan defaults are low, high interest rates will ultimately put pressure on borrowers resulting in loan defaults. Cracks are appearing in the commercial real estate (CRE) sector: Valuations have fallen by 18% compared to their March 2022 peak and while default and distress sales are low by historical standards, they are drifting higher (Figure 16). The office market is particularly vulnerable as pandemic-related aftershocks appear to have left permanent scars in this space. Office vacancies have soared to 16.7% — the highest in over 15 years. More worrisome is the fact that of the \$4.9 trillion outstanding commercial real estate mortgages, approximately \$730 billion (16%) are set to mature in 2023, 25% of which are backed by office properties.

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FIGURE 16
On the Ropes: Commercial Real Estate Prices Have Collapsed
(Green Street commercial price index)



But while doomsday scenarios à la 2008 may not be in the cards, the embers of this crisis are likely to smolder a while longer.

Troubles in the CRE market are particularly important because banks with higher exposure to CRE risk are precisely the ones that are currently more vulnerable to interest rate risk. Small and regional banks account for a mind-boggling 80% of commercial real estate lending. As of January 2023 (latest available data), prior to the current credit crunch, a whopping 67% of banks had tightened credit for land development and 57% for multifamily residential and non-residential projects. Further tightening will undoubtedly ensue, now that small banks are under pressure, exactly when credit is needed the most to refinance the maturing CRE debt. It is not hard to envision a vicious loop where tighter credit starves CRE developments prompting defaults on CRE loans which further sours banks' balance sheets. The less-harmful interest rate risk would thus transform into a more menacing credit risk. If it's any consolation, at \$4.9 trillion, the CRE debt outstanding is less than half the value of mortgage debt back in 2008.

Importantly, unlike the sharp, violent, and brutal crunch of the 2008 financial crisis, this crisis will likely unfold more slowly and less urgently. Its slow burn will resemble more closely to the 1980s/1990s savings and loans (S&L crisis), which took more than a decade to unfold. In the end, the crisis claimed a total of 1,600 FDIC-insured banks. Then, as now, high inflation prompted a sharp rise in interest rates, which in turn, eroded banks' assets — fixed-rate mortgages instead of U.S. Treasuries, but the principle is the same. As is the case currently, S&Ls found themselves squeezed between fixed-rate low-yielding loans and rising interest rates on flighty deposits.

Which brings us to the second reason for caution: zombie institutions. The S&L crisis was ultimately very expensive (costing taxpayers around \$130 billion, instead of the initial \$25 billion) because many of the insolvent thrifts were kept alive. The initial reaction then, as now, was not one of quick resolve but rather of forbearance. Many S&Ls were allowed to operate in an attempt to let them grow out of their losses. They didn't. Worse, they invested in riskier and riskier projects trying to recoup their losses, sliding further into insolvency.

If anything, the policy response this time around has been orders of magnitude more generous than back then. Most have criticized what appears to be an implicit guarantee of all deposits, whether insured or uninsured. While this will certainly further exacerbate moral hazard issues, an argument can be made that transactional deposits (those used for daily transactions, payroll, etc.) may warrant some type of protection. And flooding the market with liquidity to prevent more bank failures is the right move.

The bigger issue is the weakening of collateral requirements as banks pledge bonds at face value instead of market value, without a penalty and without a haircut. Such easy terms come at a cost. If this new policy becomes part of the regular panic-fighting toolkit, then banks' financial assets would rise both when interest rates decline (as bond portfolios increase in value) and when they rise (as the Fed comes to the rescue). This is a recipe for reckless behavior, one that will almost certainly sow the seeds of the next crisis. Our worry is that when the sequel to this crisis is over, the FDIC may have to collect a few more "severed toes," despite its best efforts to soothe tempers by paying a hefty ransom now.

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Strikes and Gutters: The Inflation Story

Water Sobchak: "We don't need the urn; we're scattering the ashes."

Funeral Director: "Yes, so we were informed. However, we must of course transmit the remains to you in a receptacle."

Water Sobchak: "This is a hundred and eighty dollars."

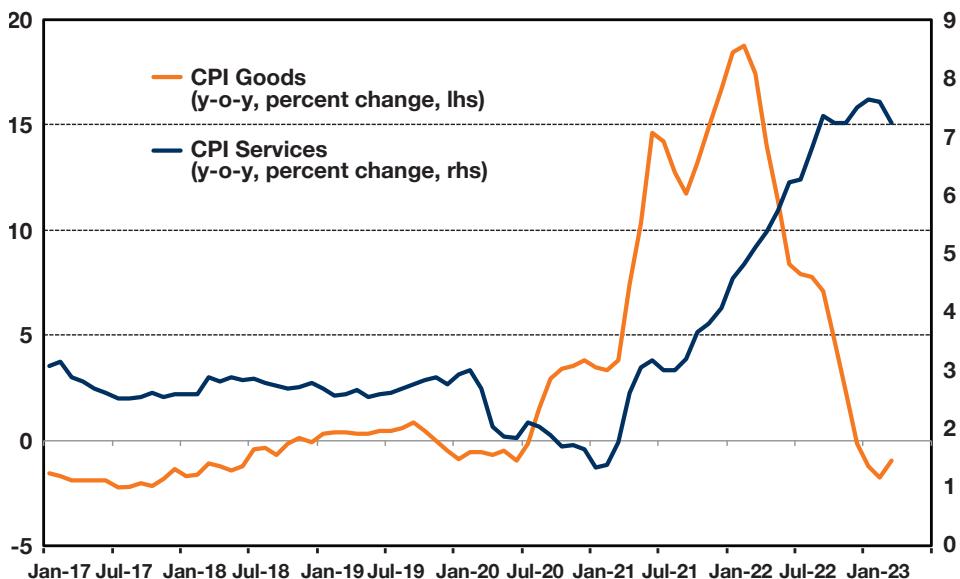
Funeral Director: "It is our most modestly priced receptacle".

— *The Big Lebowski*

A 69-cent check for a half-gallon of half-and-half, a critical ingredient for a White Russian. That's our first introduction to the Dude, clad in his tattered beige bathrobe, Hawaiian shorts, and flip-flop sandals as he writes a check for 69 cents at the local Ralphs store, while absent-mindedly listening to President Bush's comments on the Iraq-Kuwait war declaring "this aggression cannot stand." One would be forgiven a chuckle or two and not because of the quaint practice of writing a check for the grand sum of 69 cents. What sticks out the most is the actual price of half-and-half, which currently runs at \$5.49, representing a dizzying 800% increase.

The story of inflation this past year has been one of "strikes and gutters; ups and downs," as the Dude would say. Headline consumer price index (CPI) has decreased from a cycle-high of 9.1% in June 2022, to a current 5%. Improvements are also seen in the producer price indices (PPI) — often a great predictor of prices of goods: PPI for intermediate goods has crashed from a high of 22% a year ago, to a current 2%. The price of used cars has collapsed to -13%, after rising as much as 42% earlier in 2022. But other metrics of inflation have either defied gravity or have slowed at a snail-pace. As pandemic-induced spending patterns rotate away from goods towards services, goods CPI inflation has crashed to -1.2%, while service inflation has marched upwards to 7.7%, the highest in over 42 years (Figure 17). Airfares are rising at a smaller clip than a few months ago: 26% compared

FIGURE 17
A Tale of Two CPIs: Goods Inflation is Negative While Service Inflation Remains High
(year-over-year, percent change)



to 41% in October, but the current rate is still too high to draw any meaningful solace. Food inflation remains elevated at 10.2% and just a clip below cycle-highs observed in mid last year. An outbreak of avian flu, high demand, and rising costs in America's poultry farms combined for an eye-watering increase in the price of eggs of 150% earlier this year.

Since inflation first burst into the national scene back in the spring of 2021, our view has consistently been one of caution. We have repeatedly warned that while peak inflation may well be behind us, inflation will prove hard to tame. Bringing it down to the 2% level consistent with price stability requires time, a will to persevere and lots of patience. And the road is bound to be quite bumpy: CPI inflation rose by a modest 0.1% month-over-month in December, but by a hotter 0.5% and 0.4% in January and February, respectively. Measures that strip away volatilities look worse. The Cleveland Fed median CPI — a measure designed to capture underlying inflation by eliminating extreme price changes — has risen to a cycle high of 7.2%. "Sticky prices" — a measure developed by the Atlanta Fed consisting of a basket of goods and services that tend to change prices less often than other items — is running at 6.5%, off cycle highs recorded mid last year, but still uncomfortably hot.

More worryingly, core inflation — the measure of prices stripped from volatile energy and food prices — continue to remain stubbornly high. Core CPI has edged down just a tad: from 6.6% to 5.5%. Core personal consumption expenditure (PCE), the Fed's preferred measure of inflation has barely budged from an average of 5% last year to a current 4.7%. As we cautioned in our previous report, the main source of inflation is now the service sector, which is dramatically more exposed to labor costs and far harder to conquer. Indeed, core service inflation has set fresh new heights rising to 7.3%, the highest since 1982.

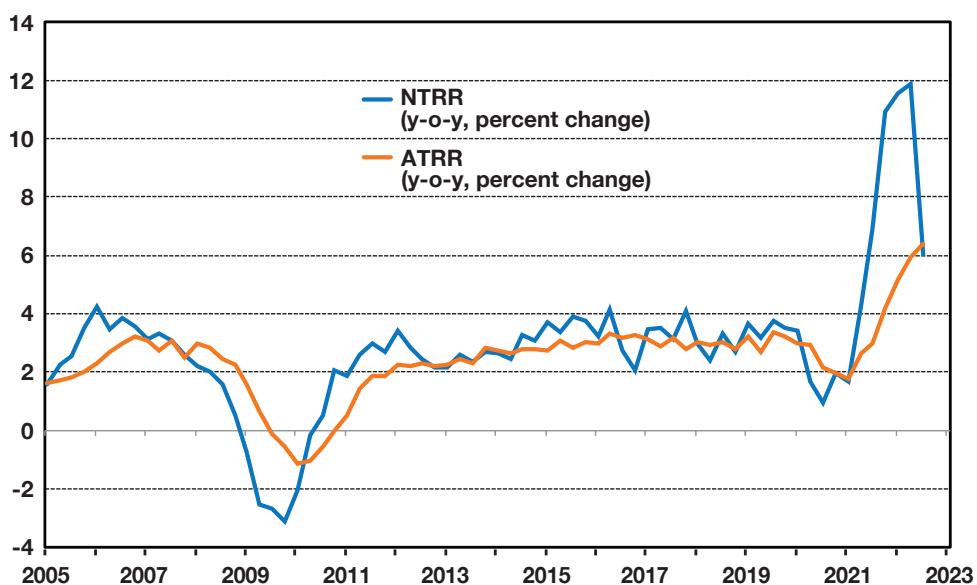
There are two main reasons why slaying core service inflation may prove difficult. The first, and most hopeful, relates to housing costs. Housing has been the primary driver of core inflation, with rent prices increasing by 8.3% and owner's equivalent rent — the housing price indicator for homeowners — rising by 8% as of the latest data. Both measures currently stand at the highest levels since 1982. But some relief is in sight as a wide array of housing indicators point to significant softness. Home prices have declined by 5% since their peak in June 2022, according to the Case-Shiller national price index. Growth in rents has slumped from a high of 17% earlier in 2022, to a current 6%, only slightly above the historical average of 4%. Undoubtedly, shelter disinflation is in the books and core service inflation will moderate once these figures show up in CPI statistics.

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The main source of inflation is now the services sector, which is dramatically more exposed to labor costs and far harder to conquer.

The problem is that the timing and the strength of this disinflation remains an open question. The Bureau of Labor Statistics (BLS) method of calculating rent inflation significantly lags market conditions, because it measures contract rents rather than spot rents (the rents tenants would pay if they signed a new lease today). In addition, leases are generally re-signed once a year and the BLS surveys units only every six months, adding additional lags to the overall process. Two new indices may be more useful on this front: the New Tenant Repeat Rent (NTRR) index — which tracks rents in units that change tenants — and the All Tenant Repeat Rent (ATRR) index — which tracks all housing units, but attributes rent changes to when they occur rather than when they are surveyed. Broadly speaking, NTRR leads the official CPI data by around one year and ATRR by around one quarter. Currently, the ATRR has not shown any sign of abating, while the NTRR began to grow at a slower clip in the third quarter of 2022 (Figure 18). This means that rent disinflation will seep into CPI statistics beginning in the third quarter of this year. Until then, housing costs will put additional pressure on inflation.

FIGURE 18
A Better Gauge of Shelter CPI: New and All Tenant Repeat Rents
 (year-over-year, percent change)

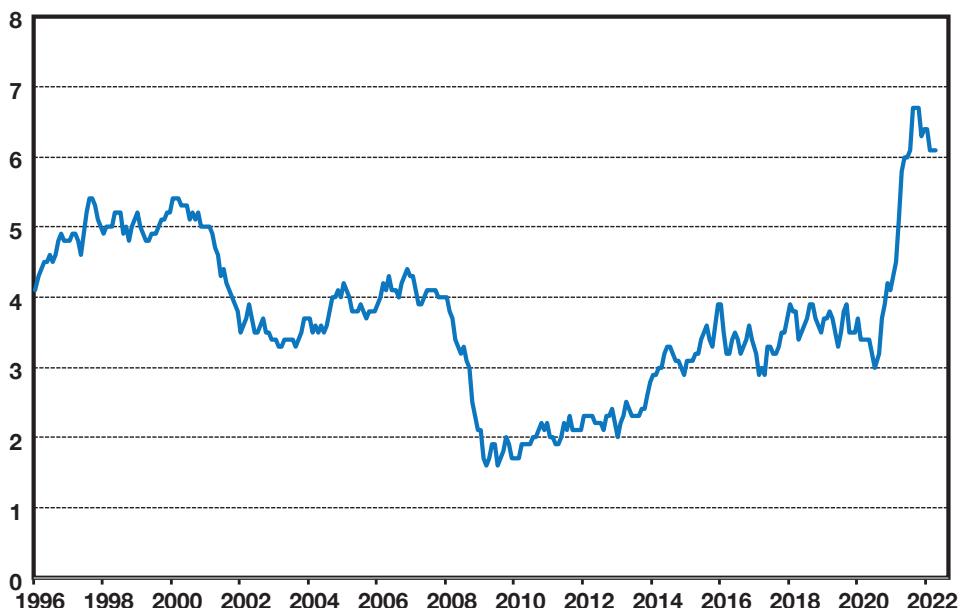


The second reason for inflation to remain anchored at an uncomfortably high range (4% to 5%) are wages. The new buzzword recently — and the Fed's new obsession — is the core-of-core (or supercore) of service inflation, a measure that strips away energy, food, and housing from service inflation. Though focusing on an ever-slimmer slice of inflation has obvious limitations, supercore inflation may be the best measure of price stickiness, as it captures the portion of inflation attributed to services that tend to be labor intensive (haircuts, plumbing services, etc.). Supercore inflation has dropped a hair since September cycle-highs, from 6.7% to a current 6.1%, but remains uncomfortably high. Supercore PCE has barely budged, hovering at an impossibly narrow range of 4% to 4.2% since mid-2021.

At the core of supercore are wages. Though moderating a bit, wage growth is still far above historical average ranges: The Atlanta Fed wage tracker shows a slight dip from 6.7% year-over-year to 6.1%, whereas the Employment Cost Index (ECI) has moderated from a growth rate of 5.7% to 5.1% as of the fourth quarter (latest available data) (Figure 19). Of course, at the heart of stubbornly high wages is a historically tight labor market. Mercifully, the latest data show some relief on this front, as labor demand appears to be easing. Job openings have declined from 12 million in March 2022 to a current 9.9 million. This is still nearly twice as large as the number of unemployed (5.8 million), but it's progress, nonetheless. Jobless claims were also revised higher over the past two months, reflecting a flurry of corporate layoffs that were not previously picked up by the data due to methodological issues in the way the Department of Labor accounted for seasonal adjustments.

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FIGURE 19
Wage Growth Has Moderated a Bit but Still Remains High
(Atlanta Fed, wage growth, year-over-year, percent change)



These developments bode well in the fight against inflation, but the softness of the labor market is still in its infancy to put a meaningful dent on wage growth and ultimately, inflation. Though the economy added 236,000 jobs in March — the lowest since April of last year — the overall pace of job formation in the first quarter was higher than at the end of 2022. The level of quits — a measure of confidence in the labor market — has edged down a bit, but at 2.6% it remains elevated compared to historical data. The Leisure and Hospitality sector, one of the industries with the highest wage growth over the past year, has continued to expand, adding 260,000 jobs in the first quarter of this year, after posting a gain of 1 million in 2022. Job openings in this sector have softened a bit after reaching sky-high levels mid-2022, but are still around double normal historical levels.

Labor supply continues to remain scarce, adding to the tightness in the labor market. Given demographic trends, there is currently a shortfall in the labor force of around 3.5 million workers. Part of the shortfall (2.1 million) is due to lower labor force participation rates, mostly among elderly workers who retired during the pandemic. The other part of the shortfall — around 1.4 million — is due to lower population growth attributed to a number of factors: lower birth rates, excess COVID deaths, and lower immigration rates. The problem is that there does not appear to be much slack in the labor market currently to boost labor supply: The employment-to-population ratio for all age groups except the elderly (older than 65) has reached pre-pandemic levels.

Our view is that wage pressures will ease up as the labor market softens and ultimately buckles. The issue is that this process will take a while longer — likely until the end of this year — when we expect recessionary pressures to take a more obvious toll on employment levels. Until then, supercore inflation, while not roaring, will continue to simmer. Perhaps the best thing to do is to break out the checkbook and write a \$5.49 check for a half-gallon of half-and-half. After all, that White Russian may be just what we need to drown the sorrows of yet another year of above-trend inflation.

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El Duderino: The Coming Recession

“I’m not Mr. Lebowski. You’re Mr. Lebowski. I’m the Dude, so that’s what you call me. That or, uh, His Dudeness, or uh, Duder, or El Duderino, if you’re not into the whole brevity thing.”

— *The Dude, The Big Lebowski*

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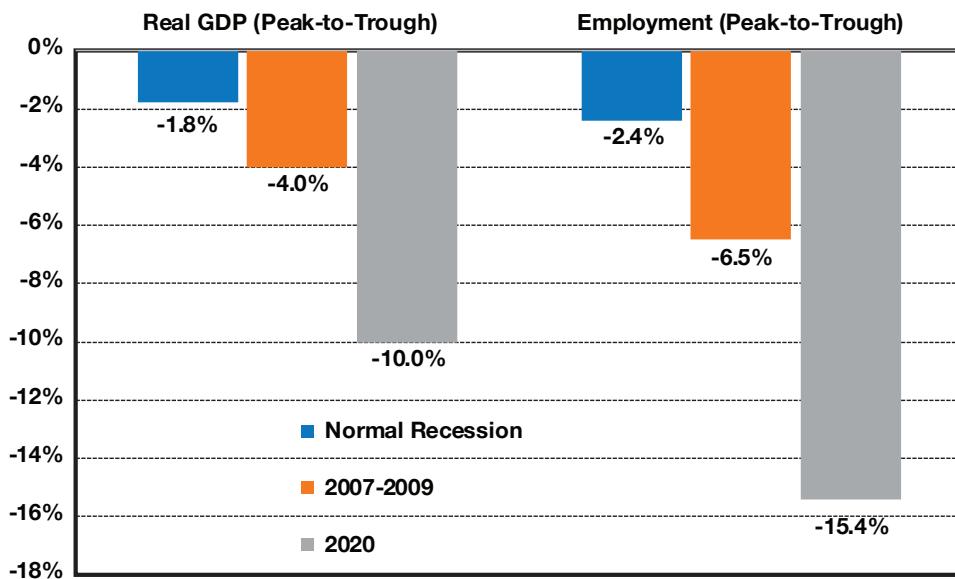
One cannot help but admire the clever names with which analysts have chosen to christen the upcoming economic downshift/downturn/fill-in-the-blank. From richcession, to techcession, to slowcession, to stallflation, there has never been a time when the economic outlook has been so colorfully and lyrically described. Of course, much of this reflects the wide range of possible outcomes and an uncomfortably high level of uncertainty. But at the core of this poetic rhapsodizing is the belief (or at least the hope) that worst-case scenarios won’t materialize and that the Fed will manage to safely land the economy despite signs that the landing strip is getting narrower and shorter by the day.

This rosy outlook is in sharp contrast with our view which tends to be less airy and more gloomy, expecting the economy to sink into a recession later this year. To be sure, our outlook envisions an entirely normal recession — a garden-variety-type, so to speak. No more, no less. In keeping with the current trend of whimsical pronouncements, we’ll name our recession “El Duderino” — the diminutive to distinguish it from the hair-raising types we witnessed in 2008 and in 2020.

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It has been a while since we last experienced a normal recession, so it would be instructive to start with a general overview of what a plain-vanilla recession looks like. The average post-war recession lasts around 10-12 months. The average drop in real GDP (peak-to-trough) is around -1.8%, far less than the -4% seen during the Great Recession, or the -9.6% collapse witnessed during the COVID shutdown. In a normal recession, the labor market sheds, on average, around 1.8 million jobs, or roughly 2.4% of the workforce, and unemployment rate increases by 2.8 percentage points. In contrast, a jaw-dropping 8.7 million and 22 million jobs were lost during the Great Recession and the COVID recession, respectively. Adjusting for labor force growth, if a “normal” recession were to strike the economy in 2023, the labor market would shrink by 3.7 million, a painful contraction no doubt, but not a calamity (Figure 20).

FIGURE 20
Normal Recessions vs the Last Two
(cumulative changes in GDP and employment, peak-to-trough)



Having said that, we are acutely aware that the case against a “normal” recession scenario is not without merit. In fact, given the current state of the economy, envisioning anything more than a soft-landing stands out as the more outlandish prediction. Even the “hard landing” crowd expects a short, shallow, and relatively painless recession. Anything worse is unlikely, the argument goes, simply because the economy is displaying the Goldilocks-like features that commonly precede happier endings: Inflation is edging down, perhaps slower than would be preferred but undoubtedly headed in the right direction; growth is running neither too hot nor too cold; the labor market is gently easing without driving up unemployment; consumer spending is slowing but still resilient; consumer balance sheets remain healthy. Most importantly, the Fed is about to put an end to its relentless rate-hiking campaign. The markets are giddy with anticipation: the S&P500 has rallied nearly 15% since October lows, shrugging off banking concerns and credit issues.

The trouble with this argument is that, in their early stages, soft-landings and hard-landings are virtually indistinguishable. Markets have a particularly awful track record of separating the two: stock returns have tended to rally for months before a recession. More specifically, S&P 500 rose, on average, by 9.7% in the 12-month period before a recession, by 5.6% three months before, and by 3.2% right before a recession. That’s because an economy on the cusp of a recession is highly unpredictable and investors often think a soft landing is ahead as soon as the Fed wraps up a rate-hiking cycle. Moreover, once a recession hits and job losses mount, predicting the depth of the recession becomes much harder.

The outlook is even more opaque in the post-pandemic economy where lavish government spending combined with pandemic related traumas (labor shortages) are delaying the pain of monetary tightening. More importantly, the metrics by which the economy is being judged are lagging rather than leading indicators — they only turn once the business cycle has soured. In some cases, they paint an even brighter picture as the expansion is drawing its last breaths. The labor market is the most laggard of them all: The average pace of job formation in the 12 months preceding a recession

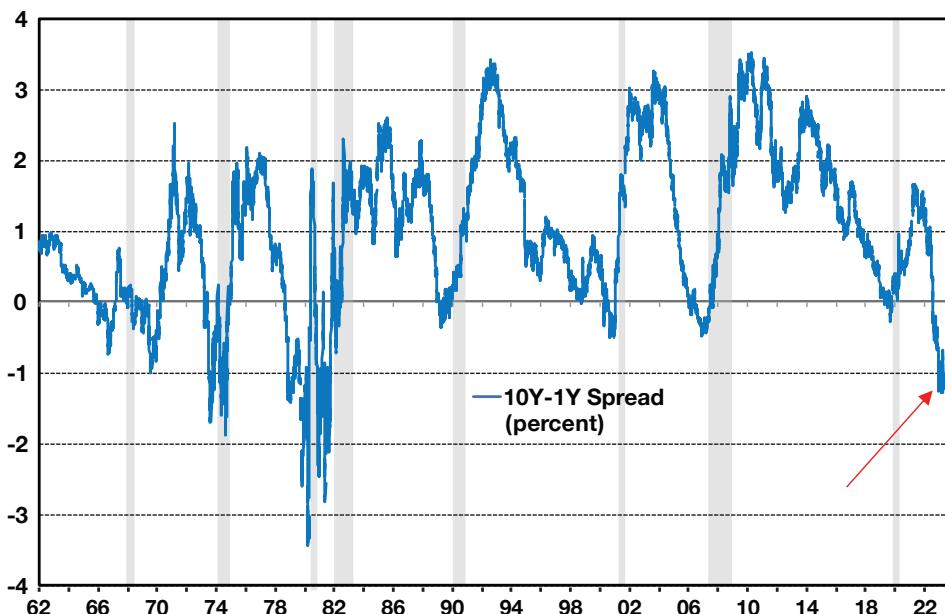
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is around 160,000 — almost matching the 170,000-figure recorded throughout expansions. Ditto for consumer spending: The average growth in real spending six months before a recession is around 3.4%, identical to the average growth during expansions. The unemployment rate is even less informative on this front: The average rate over a twelve-month period right before the economy plunges in a recession is 4.6%, lower than the 5.7% average during expansions.

Leading indicators, however, tell a different story. Most have been ringing alarm bells for a while. The yield curve — perhaps the most reliable leading indicator — has remained inverted for months. It does not matter whether one looks at the spread differential between the 10-year and two-year yields (which has predicted five out of the past six recessions), or the spread between the 10-year note and the three-month Treasury bill (which has predicted seven out of 10 post-war recessions), or our favorite, the spread between the 10-year note and the one-year note (which has predicted all post-war recessions) (Figure 21). All measures are languishing in negative territory: Since mid-summer in the case of the 10Y/2Y and 10Y/1Y spread, and since October in the case of 10Y/3M spread.

FIGURE 21
The Yield Curve Is Deeply Inverted and Has Remained Inverted
(10Y-1Y spread, percent; recession bars)



Other leading indicators are equally alarming. The Conference Board Leading Indicator Index has declined for eight consecutive months, sinking deep in negative territory at levels normally seen in the midst of a recession. The Institute for Supply Management (ISM) manufacturing survey has languished in recession territory for four straight months. The ISM services counterpart indicates continued expansion, but the latest data shows the index dangerously close to contraction territory. Capital expenditure spending (Capex) has edged down. Growth in manufacturing new orders excluding aircraft has downshifted every month since May 2022. A forward-looking Capex tracker produced by Goldman Sachs is currently registering zero growth, indicating that businesses have pulled back sharply on their investment plans.

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Corporate earnings for the first quarter are under way and, given the uncertain environment, are being watched with more dread than usual. Sentiment soared when the big banks (JP Morgan, Wells Fargo, and Citibank) posted stellar profits. But this comes after a dismal fourth quarter when profits fell 20% compared to the previous year. And it helps to be a megabank in this environment: You benefit both from an influx in deposits fleeing smaller banks and from charging higher rates on loans without having to raise the rates on deposits as much. Smaller and regional banks don't have such luxury.

There is also no denying that corporate earnings have been at best soggy and at worst worrisome heading into this year. Earnings fell by 5% in the fourth quarter of 2022, the first drop since 2020, when the pandemic was raging. In fact, the fourth quarter of 2022 was the worst earning season outside of a recession since 1998. So far, with only 6% of companies reporting in the first quarter, earnings are down 6.5%. Profit margins are being squeezed both by weak demand, as excess cash on consumers' coffers is dwindling down, and by rising costs, as higher wages begin to bite. Pricing power is also ebbing: While most companies were able to pass on cost/wage increases to consumers over the past two years, it may be harder to do so as shoppers turn more prudent. A large number of firms are planning slower price increases this year. Some have outright cut prices, either to clear inventory or to lure sales. Tesla's electric cars are now around 20% cheaper than one year ago.

Productivity measures are simply dismal. This is not surprising. In the late stages of a normal business cycle as inflation, wages, and jobs stay firm, economic activity melts away. This puts pressure on productivity. In fact, productivity behaves quite predictably during the entire business cycle: It rises in recessions as firms cut employment and institute cost-cutting measures and it falls in late stages of an expansion as firms hold on to their labor force. Companies are even more determined to hoard labor after the traumatic labor shortages experienced post-pandemic. Productivity growth collapsed by -1.8% in the fourth quarter of 2022 (latest available data) — the worst showing in the post-World War II era. This is consistent with recessionary periods: As real activity and sales slow, and productivity takes a dive, firms will take measures to protect margins either by cutting Capex, labor, or both. This is how most recessions are born.

More concerning is the coming credit crunch. Even prior to the banking crisis, banks had already tightened credit to levels seen only during recessions. Small businesses report a harder time obtaining loans, according to the latest National Federation of Independent Businesses survey. A full 45% of banks have tightened credit for commercial and industrial loans, for companies large and small. Nearly 30% have done so for consumer credit cards. Commercial real estate has fared the worst with roughly 70% of banks tightening credit on loans for land development and 57% on multi-residential and non-residential loans. For reference, the comparable numbers were only slightly worse in the midst of the Great Recession and the COVID pandemic, when a full 80% of banks tightened credit.

Troubles in commercial real estate (CRE) may further compound these issues. As discussed above, small banks account for nearly 80% of CRE loans even as the sector is being pummeled by two adverse trends: rising interest rates and the lingering effect of the pandemic which shuttered offices and shopping malls. Reopening has not helped much, at least not in some submarkets. Office availability in some cities remains at dizzying-heights, higher even than during the Great Recession: 16% in New York City, 17.6% in Los Angeles, and 21.5% in San Francisco. Valuations have fallen. According to the MCI Real Capital Analytics index, multifamily property price index is down by -13.1% from its peak in 2022, retail by -4.9%, and offices in central business districts by -4.2%.

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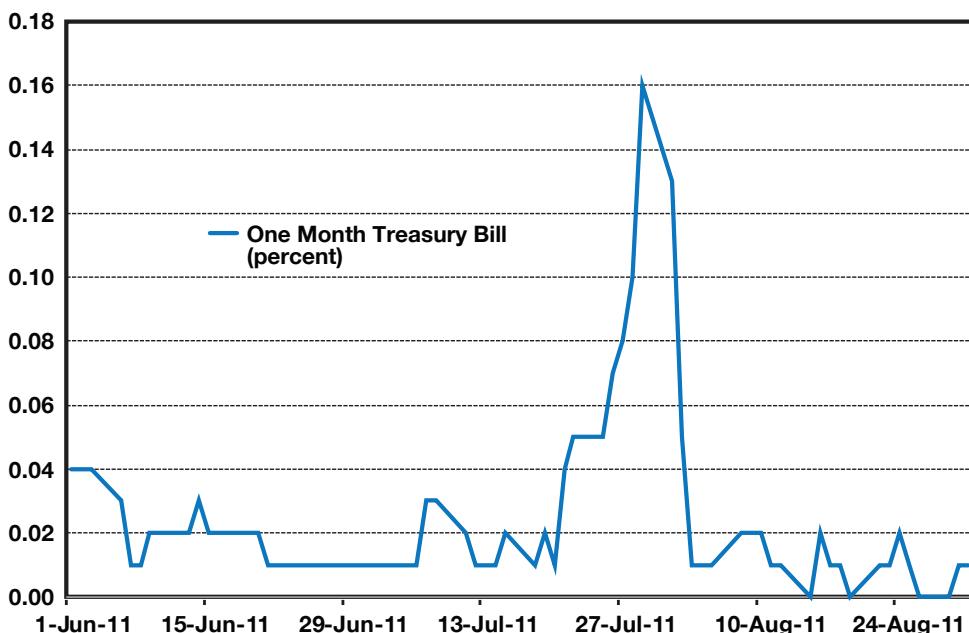
More pain will come. As we argue above, this recession will not be the heart-stopping kind seen in 2008-2009 or 2020, but rather resemble more closely to the slow-brewing crisis of the late 1980s and early 1990s. From 1989-1994, the commercial real estate all property index fell by 17.1%, while office valuation collapsed by 22.1%. A similar story is unfolding today: Office buildings, which remain eerily empty, will fall further in value. Property owners may decide it's best to cut losses and forgo refinancing at higher interest rates and tough credit terms. Brookfield, an asset manager, decided to hand over the keys of two vast office towers in Los Angeles to Citigroup and Morgan Stanley, rather than refinance the nearly \$800 million it owed them. Others may follow suit. Before long, souring loans may pop up on banks' balance sheets, further exacerbating their losses from long-term Treasury securities.

Add to this what is surely to be a melodrama of trillion-dollar stakes: the looming debt ceiling. On Jan. 19, the Treasury announced that the country had hit its maximum debt (of \$31.4 trillion) and it had embarked on "extraordinary measures" — a bag of accounting tricks to conserve cash. The "X-date" — when the calamity is meant to strike — is currently uncertain, but most expect it to be in early-to-mid August. We think it may come sooner, likely in mid-July, for two reasons: Tax season has been rather disappointing and the deferral of taxes for the state of California until mid-October will weigh on government coffers. Treasury cash on hand is currently at a cycle low.

The two sides have made little progress so far. House Republicans have put forward a plan to temporarily raise the debt ceiling until May 2023 in exchange for caps on either non-defense discretionary spending or overall discretionary spending after paring the federal budget back to 2022 levels. In addition, the proposal would scrap the president's loan forgiveness plan (currently tied up at the U.S. Supreme Court), claw back unspent COVID funds, and institute work requirements for social welfare programs. The White House insists there should be a clean increase of the debt ceiling. The last time the two sides were this far apart was in 2011: Funding costs, as measured by the one-month Treasury bill rate, soared when negotiations dragged on (Figure 22). A repeat this year would undoubtedly push an already vulnerable economy over the edge.

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FIGURE 22
The Debt Ceiling Debacle: Funding Costs Skyrocketed in Summer 2011
(one month Treasury bill, percent)



As this daunting list of adverse factors suggests, soft-landing the economy is a task for a pantheon of deities, not mere mortals with a penchant for tactical technocratic maneuvers with a mixed record of success. The Fed was already struggling to balance two mandates: tampering down inflation without killing growth. Its job just became immensely more complex with financial stability thrown into the mix. Some have argued that the Fed may be able to separate the tools and the mandates: Use high interest rates to tame stubbornly high inflation and financial stability tools to douse the red-hot embers of the banking crisis. Perhaps. In the short term. And as long as liquidity risk does not morph into something more sinister such as default risk, which as we argue, is entirely possible with commercial real estate loans. The problem is that this neat division between monetary-policy and financial-stability tools becomes blurrier in the long run, especially if liquidity issues are more deeply entrenched or if they transform into credit risk.

All this points to a scenario where a recession is unavoidable. We expect it to hit the U.S. economy between the third and the fourth quarter of this year, and last around 10 months, in line with a normal garden-variety recession. Real GDP growth will drop by around 1.7% from peak-to-trough and the labor market is expected to shed around 3 million jobs. We anticipate the Fed to deliver two more rate hikes over the next two months, placing the terminal federal funds rate at 5.25%-5.5%, but unlike the market's rosier projection, we do not expect any cuts until December of this year, if the Fed is serious about its battle against inflation. It should be serious. Its reputation is on the line. Its answer to the question "Where do I go to get my reputation back?" — once infamously asked by Mr. Donovan, Reagan's labor secretary — is a simple one but a painful one: Conquer inflation even if it risks a recession.

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ORANGE COUNTY, SOUTHERN CALIFORNIA, AND CALIFORNIA

Despite a very tough environment in 2022 — tightening of monetary conditions, falling real income, a high rate of inflation, and fever-pitch fears of a recession — the economies of Southern California and the state as a whole have done quite well. If anything, the state and the region spent the better part of last year mitigating the damage from the pandemic. As we anticipated over a year and a half ago, inflation has played and will continue to play a significant role in the fortunes of the local and national economies. And while a 40-year high inflation has spawned the fastest and most aggressive rate hiking cycle in more than 40 years, the economy has managed to survive such an onslaught, at least so far, as discussed in our national report.

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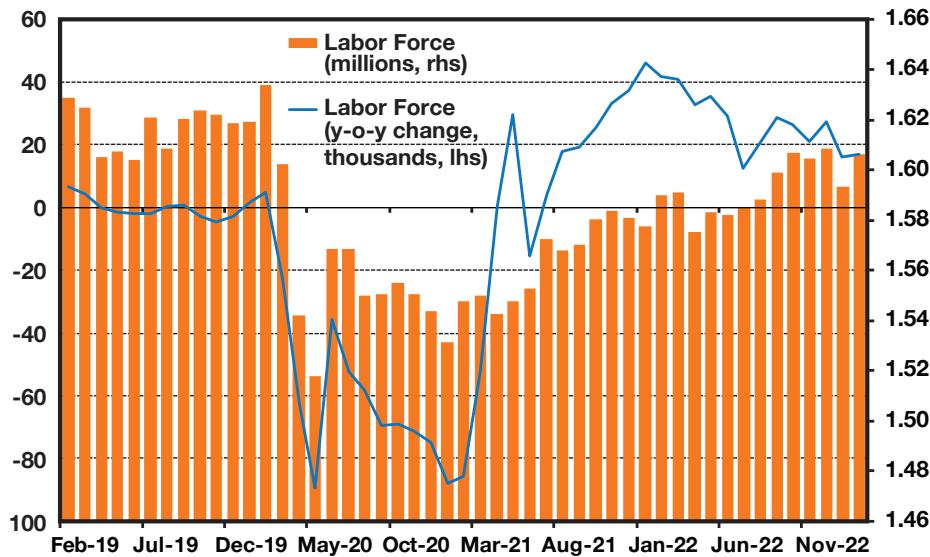
Employment Conditions Improved Yet Pandemic Pain Persists

The labor market put on a robust performance in 2022, both in the state and local economies. Job creation picked up and unemployment rates fell throughout the year. After dipping close to their historic lows in mid-2022, unemployment rates have crept up a tad in the past four months but remain below year-ago levels. For example, the unemployment rate for Orange County improved to 3.4% in February 2023 (latest available data) compared to 3.7% a year ago. The rate for the state fell to 4.8% from 5% over the same period. In other Southern California counties, similar trends prevailed: Los Angeles County registered an unemployment rate of 5.3% in February 2023 and 5.8% in February 2022; the Inland Empire 4.5% from 4.7% a year ago; and Ventura County 4.1% from 4.3% in February 2022.

Despite soaring wages and generous bonuses, there has been little change in the size of the labor force in some Southern California counties over the past 12 months.

One of the remarkable phenomena of the post-pandemic economy has been the acute shortage of workers, both at the national and local levels. Indeed, despite soaring wages and generous bonuses, there has been little change in the size of the labor force in some Southern California counties over the past 12 months (Figure 23). Los Angeles County has a smaller labor force now than it did a year ago, while Orange County's labor force rose by 1.1% and that of Ventura County by 0.6%. Inland Empire's labor force remained virtually unchanged over the past year. The Southern California region as a whole shows no change in the labor force even though more people are finding jobs and working, which, of course, has resulted in a lower unemployment rate. The labor markets remain very tight locally as in the nation. For the state, the labor force increased by 0.9% during the past 12 months.

FIGURE 23
Orange County Labor Force Has Shrunk Over the Past 3 Years
(labor force, level and percent change)



Payroll employment, another measure of labor market conditions, has also expanded quite robustly in 2022. Orange County gained a jaw-dropping 84,000 jobs, growing by 5.3%, its largest ever annual increase. A full 44% of these gains, or 37,000 jobs, were in the Leisure and Hospitality industry — a sector that was nearly wiped out during the pandemic, but which has come roaring back since the end of COVID restrictions. Within that industry, the Arts and Entertainment subsector recovered 16,000 jobs and Accommodations and Food Services gained 22,000. Education and Health Services (12,000 or 5.1%) and Professional and Business Services (11,000 or 3.4%) were the two other major sectors to also register sizable increases.

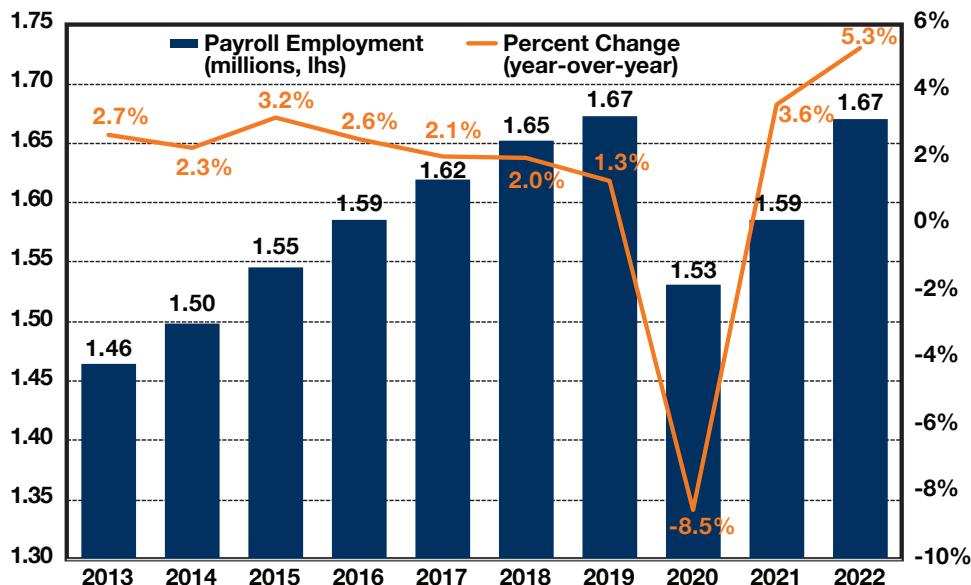
The broader Southern California region has also performed admirably. Payroll employment swelled by 415,000, for a 5.4% increase over the course of 2022. These gains were distributed across the region, with Los Angeles County gaining 234,000 jobs (a 5.4% increase), the Inland Empire adding 85,000 (5.4% growth), and Ventura County adding 13,000 (a 4.2% increase). Leisure and Hospitality was the biggest gainer in most counties, except in the Inland Empire, where Trade, Transportation and Utilities sector edged it out.

Despite impressive job gains in Orange County, the devastating losses from the pandemic have yet to be fully recovered. Orange County's household employment is still 37,100 jobs, or -2.3%, below the pre-pandemic level (February 2020) and Los Angeles County is 260,000 jobs below its pre-pandemic level for a -5.2% shortfall. This is in contrast with the national picture where pre-pandemic employment levels were reached in mid-2022. More worryingly, Orange County's labor force is still 27,000 workers short (or 1.7% below) of the levels recorded in February 2020 (before the pandemic) (Figure 24).

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The other measure of employment situation, payroll employment, shows a marginally more upbeat picture. Payroll job totals in Orange County barely exceeded their pre-pandemic levels in February 2023. But there are divergences within sectors: The Leisure and Hospitality industry, which was hurt the most by the pandemic, is 2,300 jobs or -1% shy of its February 2020 level and Construction is 1,400 below for a -1.3% loss. In contrast, the Transportation, Warehousing and Utilities sector has steadily gained jobs: 5,300 for a 17.5% increase. Couriers and Messengers, a subsector of the Transportation industry, is up a whopping 35.7% since the pandemic!

FIGURE 24
Orange County Employment: Almost Back to Pre-Pandemic Levels
 (level and percent change)



In contrast, the recovery in the Inland Empire has been extraordinary: Not only has it regained all the losses of the COVID recession, but it has gained an additional 30,000 household jobs for a 1.5% increase and 81,000 payroll jobs, for a 5.1% improvement. This means that the Southern California region, with the exception of the Inland Empire, has been mostly treading water in the last three years.

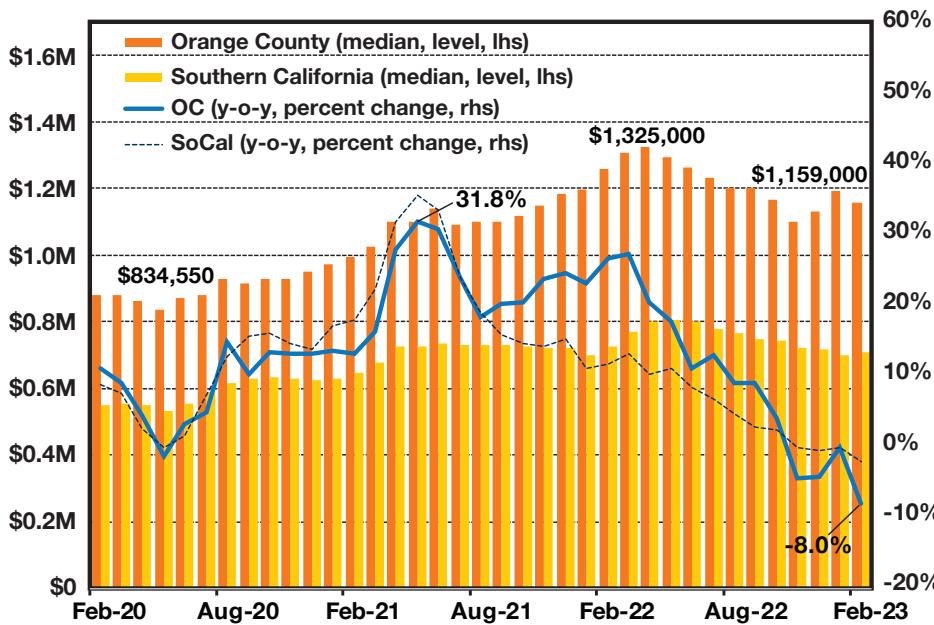
Housing

After soaring for two straight years, home prices in Orange County and the broader Southern California region have started to decline. Based on the data from the California Association of Realtors, the median price of a single-family home reached a high of \$1.295 million in Orange County in May 2022, \$799,000 in Los Angeles County, \$650,000 in Riverside County and \$490,000 in San Bernardino County. This phenomenal increase was primarily due to the idiosyncratic effects related to the pandemic: Home prices initially fell as the lockdowns began and panic set in, but then leapt up sharply

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as rock-bottom mortgage rates and a desire (and opportunity) to work from home drove demand. Compared to February 2020, prices at the peak of the market (May 2022) represented increases of 47.2% for Orange County, 37.5% for Los Angeles County, 51.9% for Riverside County and 40.9% for San Bernardino County. The average increase for the Southern California region was 46.4% (Figure 25).

FIGURE 25
Home Prices Have Declined a Bit But Remain Elevated
(median home prices, level and year-over-year percent change)



As inflation took hold in late 2021, the Fed embarked on its relentless rate hikes. Home prices retreated. Since October 2022, housing prices have fallen not only on a monthly basis but also on a year-over-year basis. As of February 2023, the latest available data, the median price fell by 8% in Orange County, 6% in Los Angeles County and 1.7% in Riverside County. San Bernardino County is on a declining trend even though the latest month showed an increase of 3.7%. While we expect further drops in home prices, even with these corrections, current prices remain significantly higher than pre-pandemic figures. For example, compared to February 2020, the median home price in February 2023 is higher by 31.7% in Orange County, 25.2% in Los Angeles County, 39% in Riverside County and 41.8% in San Bernardino County.

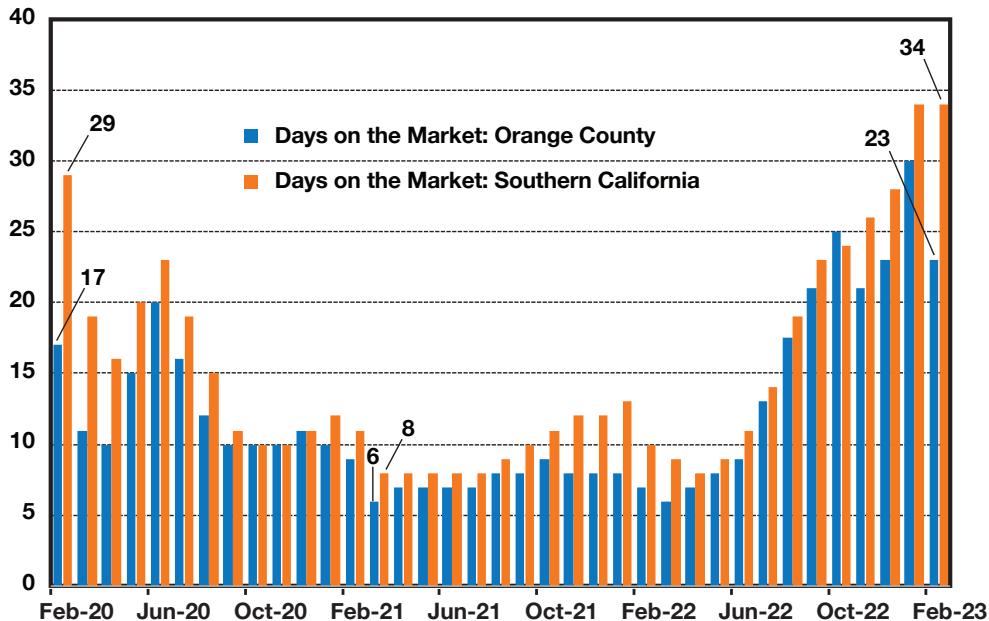
Higher mortgage rates have substantially slowed home sales and increased the time on the market (Figure 26). For Orange County, the average time on the market for a home for sale has jumped from six days in March 2022 to 23 days in February 2023. The comparable figures for the rest of the counties are as follows: In Los Angeles County, an increase from eight days to 30 days; in Riverside County, from 11 days to 45 days; and in the broader Southern California region, from nine days to 34.

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Supply continues to be tight as many homeowners are reluctant to move given current low rates in their fixed rate mortgages. Though mortgage rates have retreated from cycle-highs of nearly 7%, at a current 6.5%, the 30-year fixed mortgage is nearly 200 basis points higher than one year ago, and twice as high compared to January 2022. Tightening credit conditions, given the current banking turmoil, will put further pressure on the housing market.

Tightening credit conditions, given the current banking turmoil, will put further pressure on the housing market.

FIGURE 26
A Tougher Sell: Homes for Sale Are Spending More Days in the Market
 (number of days on the market, level)



Strikes and Gutters: The California Budget

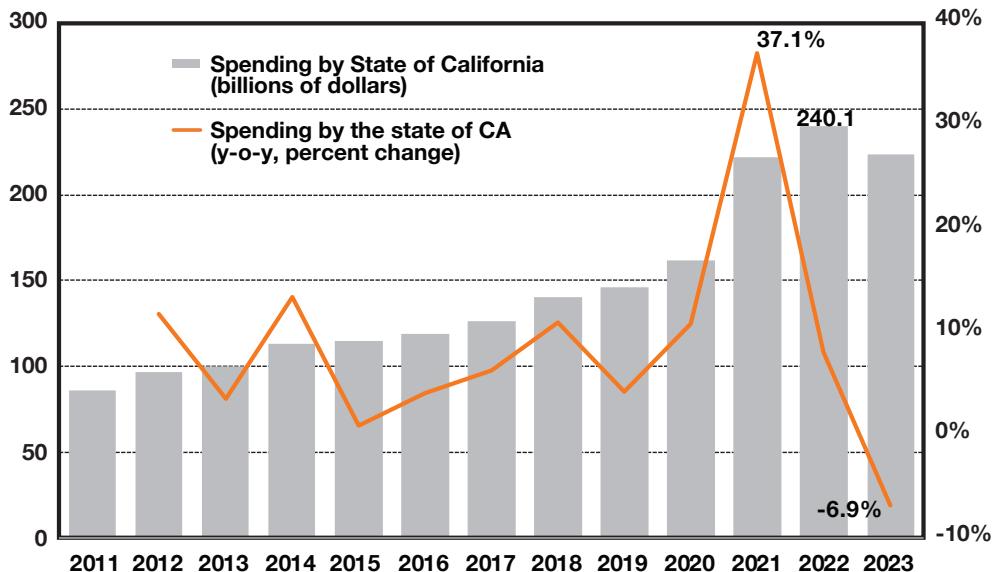
California is currently doing what it historically has done best: going from years of plenty to years of lean. After accumulating hefty budget surpluses in the last two years, the state is facing a deficit in fiscal year 2023-2024.

To be sure, the recent budget surpluses were as much a result of California's recovery from the COVID recession as the largesse of the federal government during the pandemic, which lavished generous support on state and local governments. In fact, federal funds provided nearly as much support as the state's own general funds coffers.

For 2021-2022, support from the federal government accounted for 42.4% of the \$445.6 billion in total spending, while the state's general fund's share was 43.1%. The remainder came from the state's 500 special purpose funds and the bond fund. But because the pandemic and generous federal subsidies distorted historical patterns, it is most instructive to focus on historical spending outside of the past three years (Figure 27).

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FIGURE 27
Years of Lean and Plenty: California General Fund Budget
 (billions of dollars, year-over-year percent change)



Over the past 10 years, state spending has grown by an average annual rate of 10.1%. For the last three years, government spending skyrocketed, but the coming year is likely to bring it back to earth, with no additional support from the federal government and lower state tax revenues.

What a difference two years make! Around this time in 2021, the governor's finance department was projecting a surplus of \$29 billion for the 2021-2022 fiscal year. A year ago, at the start of the 2022-2023 fiscal year, the governor boasted of having the largest surplus in history of \$97.5 billion. The reserve funds received a large chunk of that surplus. That projection, however, fizzled out by November 2022.

Digging deeper into the state's general fund, it is apparent that there are three main sources of revenue: personal income taxes, corporate taxes, and sales and user taxes. All are highly correlated with the state of the economy. But some of the state's stalwart sectors are now under stress. The high-tech sector has announced massive layoffs — more than 100,000 last year and an additional 130,000 so far in 2023. Google alone has shed 12,000 jobs. More job losses are expected.

Venture capital funding has taken a serious hit, exacerbated by the fall of the Silicon Valley Bank. California's film and entertainment sector has also continued to shrink, with Disney announcing a cut of 7,000 jobs. A major source of the state's income tax revenue, the non-salary, market-based compensations in the form of bonuses and options, is expected to be hit severely. Compounding these woes, is the ongoing feud between longshoremen and port operators, which has pushed quite a sizable chunk of cargo operations from the ports of Los Angeles and Long Beach to the East Coast and Gulf Coast.

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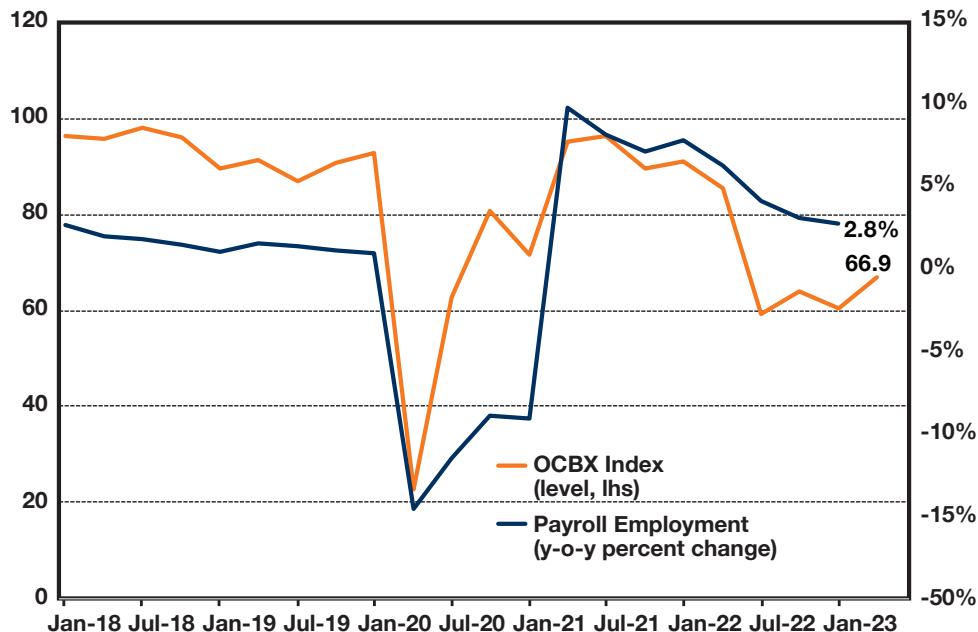
Californians, in general, appear to be in a dour mood. The latest Public Policy Institute of California poll (February 2023) indicated that two-thirds of respondents expect bad times ahead for the state in the remainder of 2023. A full 62% think the state's economy is already in a recession. Given our forecast that the national economy will likely experience a recession in the second half of this year, we believe that the government's deficit for fiscal year 2023-2024 at \$29.5 billion is woefully underestimated. Our view is that the state general fund deficit will be around 50% higher than current estimates. Given current budget spending proposals, that amounts to around \$35-\$45 billion. The state, of course, can address this issue in a number of ways, including reducing and/or postponing spending, making use of the various surplus reserves, or raising taxes.

Orange County Business Sentiment

Given the scarcity of data at the local level, the Woods Center has conducted the Orange County business expectations survey (OCBX) for more than two decades — a tool that offers supplemental information for our analysis and forecasts. This survey of several hundred business executives provides us with timely and diverse points of view and is a rich source for gauging Orange County business leaders' short-term expectations about the local and national economies. Combining answers to several questions, we construct an overall index, which ranges from 0 to 100. A value over 50 indicates expectations of continued growth of the local economy. As Figure 28 indicates, the index has a remarkably strong track record of predicting employment changes and is a useful tool for forecasting. Our latest survey was conducted at the end of March 2023. The OCBX index ticked up to 66.9 for the second quarter compared to a 60.5 reading in the first quarter. The index has remained range-bound between 60 and 67 for the last four quarters, since the start of the rate-hiking cycle by the Fed.

Given our forecast that the national economy will likely experience a recession in the second half of this year, we believe that the government's deficit for Fiscal Year 2023-2024 at \$29.5 billion is woefully underestimated. Our view is that the state general fund deficit will be around 50% higher than current estimates.

FIGURE 28
Range-Bound: OCBX Sentiment Improved but Still Below Historical Values
(OCBX index, level, payroll employment, year-over-year percent change)



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Inflation continues to remain top concern for Orange County business leaders for the past four quarters, succeeded by labor/supply chain issues. But the latest survey showed increased concerns related to budget deficits, presumably the consequence of the current stalemate over the debt ceiling. A third of respondents expect inflation to be between 4% and 5% by the end of 2023, while a third think it will be between 5% and 6%.

A question about the current banking turmoil revealed that most Orange County business executives (39% of respondents) don't expect the current hiccup in the financial sector to turn into a major crisis. However, a majority of respondents (50.8%) view it as a potential systemic risk. There is also widespread apprehension that we haven't seen the end of banking sector woes and that more bank failures may occur in the near future. The good news is that Orange County banks, those with headquarters in the county, appear to be in relatively good shape (Table 1). Among the top 10 Orange County banks, none seem to have the issues that plagued the Silicon Valley Bank or that are currently haunting the First Republic. Their capital ratios are reasonable as are the ratios of loans to assets. Most of the Orange County banks have sizeable deposits relative to their assets, which have shown little sign of fleeing so far.

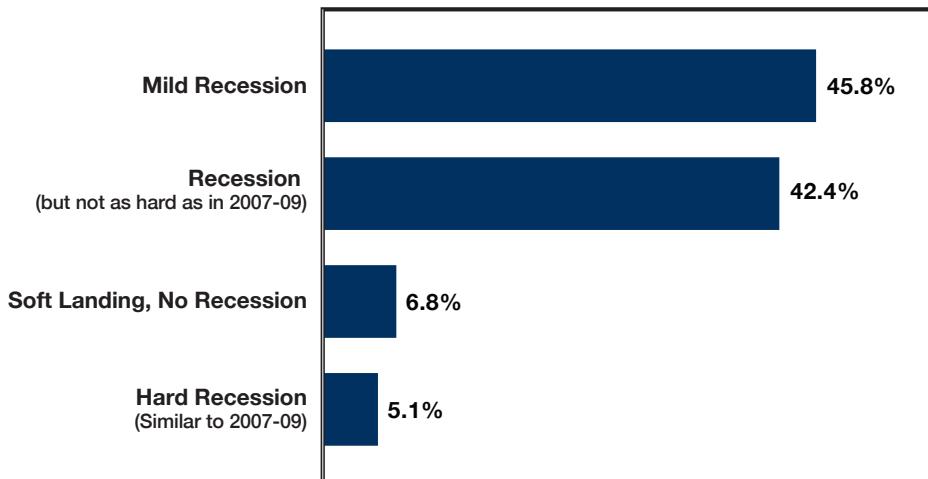
TABLE 1
Orange County Based Financial Institutions
Data as of December 2022 (Assets Over \$1 Billion)

FINANCIAL INSTITUTION	DEPOSITS (\$B)	ASSETS (\$B)	DEP AS % OF ASSETS	TOTAL CAPITAL RATIO OR NET WORTH	HOLD TO MATURITY AS % OF ASSETS
1 SchoolsFirst Federal Credit Union	24.3	28.2	86%	10.08	25.3%
2 Pacific Premier Bank	17.4	21.7	80%	15.74	6.4%
3 First Foundation Bank	10.4	13.0	80%	11.01	6.6%
4 Banc of California	7.1	9.2	78%	16.02	3.6%
5 First American Trust, FSB	6.6	6.7	99%	28.81	0.0%
6 Nuvison Federal Credit Union	2.5	3.0	85%	11.35	0.0%
7 Credit Union of Southern California	2.1	2.6	83%	11.12	0.0%
8 Orange County's Credit Union	2.1	2.5	84%	10.34	0.0%
9 Commercial Bank of California	1.8	2.1	84%	11.55	2.9%
10 LBS Financial Credit Union	1.8	2.0	87%	12.42	27.7%
11 Commerce West Bank	1.3	1.4	91%	16.82	3.6%

A question about the current banking turmoil revealed that most Orange County business executives (39% of respondents) don't expect the current hiccup in the financial sector to turn into a major crisis. However, a majority of respondents (50.8%) view it as a potential systemic risk.

Orange County business executives' opinion about the likelihood of a recession has shifted since last quarter, as shown in Figure 29. While 45.8% (compared to 52.3% last quarter), think the U.S. economy will experience a mild recession, over 40% (35.6% last quarter) expect the recession will be more serious but not as bad as the 2007-2009 recession. Only 6.8% (4.6% last quarter) take the administration's view that the Fed will be able to engineer a soft landing. At the same time, 5.1% (7.7% last quarter) believe that the U.S. economy is headed for a serious recession.

FIGURE 29
Hard Landing or Soft Landing
(OCBX, percent of respondents)



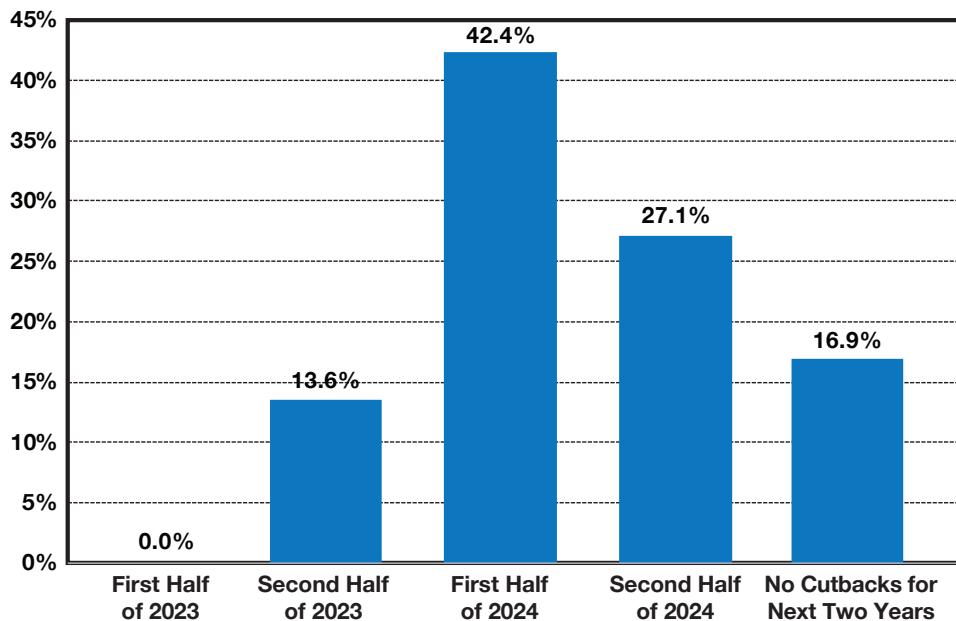
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When asked when the impending recession may strike the economy, opinions are, understandably, split. A quarter, 25.4%, believe that we are currently in a recession, whereas 8.3% think that while we're not in a recession right now, it will begin in the first half of 2023. The majority, 45.8%, expect the recession to start in the second half of the year, while 13.6% think it will occur in 2024. On the other extreme, 6.8% believe there will not be a recession in the next two years.

Despite a hardline stance from the Fed in combating inflation — and their professed willingness to keep interest rates high as long as needed to bring inflation to the 2% target — the market is penciling in a rate cut as early as this summer. In contrast, the Orange County business community is more in line with the Fed's thinking and does not expect a near term change in the Fed's policy. In response to the question as to when the Fed is expected to begin cutting rates, only 13.6% think that it will happen this year. Over 42% expect it will be in the first half of 2024 and 27.1% anticipate the first rate cut in the second half of 2024. Another 16.9% don't expect the Fed to lower rates during the next two years (Figure 30).

The Orange County business community is more in line with the Fed's thinking and does not expect a near term change in the Fed's policy.

FIGURE 30
The Big Pivot: When Will the Fed Start Cutting Rates
(OCBX survey, percent of respondents)



Forecasts

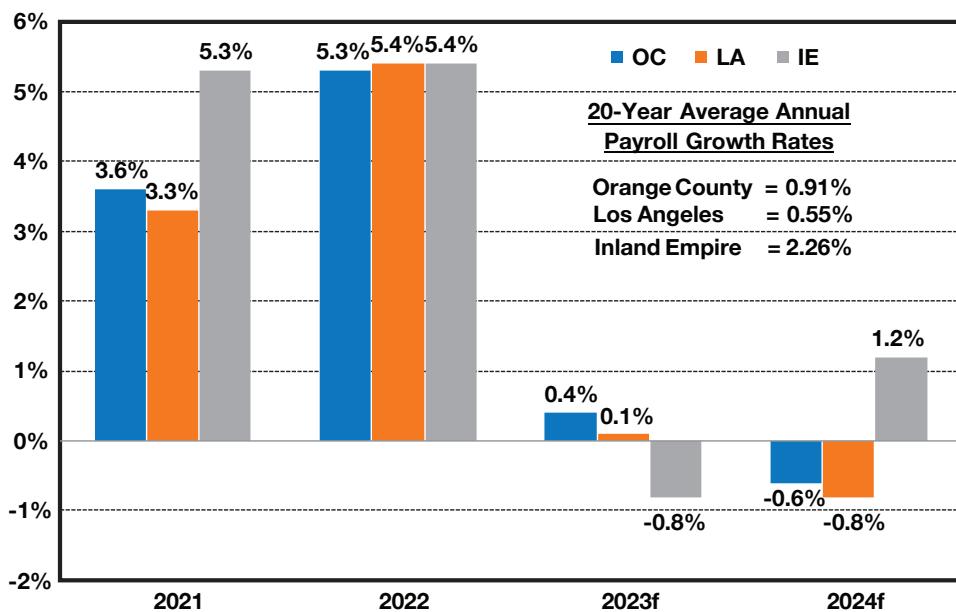
The many issues plaguing the economy — inflation, rate hikes, banking turmoil and wrangling over the debt ceiling — make for an uncertain outlook not only at the national level but also for the local economies. There have been ongoing discussions about when and if the Federal Reserve's tightening will lead to a recession and its intensity and duration. Our view for some time has been that the current inflation is stubbornly sticky and, in spite of sharp increases in interest rates, it will take a while for it to edge down to the level consistent with the Fed's 2% goal. In fact, we believe that it may be unrealistic to expect that to happen in the near term. The most likely scenario is one where inflation settles in the 3%-4% range for a while, at least over the forecast horizon (the end of 2024). Higher-than-average inflation will be accompanied by a garden-variety recession that will start sometime in the second half of this year. Consistent with this scenario, we expect the local economies to grow at a slower clip over the next couple of years, relative to the recent past.

In a sense, the past two years have been somewhat of an anomaly when it comes to job gains, which have been dramatic, making up for sizable losses during the pandemic. Take Orange County: It added 55,000 jobs in 2021 and 84,000 jobs in 2022 for annual increases of 3.6% and 5.3%, respectively. Yet the average annual rate of growth for the county for the past 20 years is only 0.91%. In line with historical figures and reflecting overall weakness, we expect Orange County payrolls to grow by a feeble 0.4% in 2023 and decline by -0.6% in 2024 (Figure 31).

In line with historical figures and reflecting overall weakness, we expect Orange County payrolls to grow by a feeble 0.4% in 2023 and decline by -0.6% in 2024.

Similar trends will play out in the rest of the Southern California region. Los Angeles County added 137,000 jobs in 2021 and 236,000 in 2022 for 3.3% and 5.4% rates, respectively. Its 20-year average annual growth rate is 0.55%. We expect its payroll jobs to increase by a modest 0.1% in 2023 and decline by -1.2% in 2024. Inland Empire employment rolls will decline by -0.8% in 2023 but increase by 1.6% in 2024, far below the soaring rates of 5.3% in 2021 and 5.4% in 2022. Its 20-year average annual payroll job growth rate has been 2.26%.

FIGURE 31
Tougher Times Ahead: Payroll Growth Forecasts
(annual averages)



A slowing economy will also lead to higher unemployment rates throughout the region. We expect the average annual unemployment rate in Orange County to rise to 3.6% in 2023 and 4.2% in 2024 after dipping to 3.2% in 2022. *Monthly* unemployment rates will show great variation, with the peak in Orange County approaching 5% in 2024. Los Angeles County is expected to experience average annual unemployment rates of 5.8% in 2023 and 6.4% in 2024, reaching a peak of 7%. Inland Empire's average unemployment rate is anticipated around 4.7% in 2023 and 5.4% in 2024, with a peak of 6.5%.

Home prices have been on a downward trend and a slowing economy will further erode home values. We expect a further decline of 5% in year-over-year median home prices by year-end 2023 but with a small increase in 2024.

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